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Do You Even Crypto, Bro? Cryptocurrencies in Household Finance

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DO YOU EVEN CRYPTO, BRO?

CRYPTOCURRENCIES IN HOUSEHOLD FINANCE

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Abstract: Using repeated large-scale surveys of US households, we study the cryptocurrency investment decisions and motives of households relative to other financial assets. Cryptocurrency holders tend to be young, male, and more libertarian relative to non-crypto holders. Crypto holders expect much higher rates of return for crypto and perceive it as relatively safer than non-holders do. For those holding cryptocurrencies, changes in Bitcoin prices translate into their purchases of durable goods. Finally, information about historical returns of cryptocurrencies in an information provision experiment embedded in the survey leads individuals to increase their desired crypto holdings and increases their actual cryptocurrency purchases subsequently. We compare these views and behaviors to those of households toward other financial assets and argue that cryptocurrency is unique in many of these respects.

JEL: E4, G5, D8

Keywords: Cryptocurrency, household finance, surveys

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<i>"[Bitcoin] is gold for nerds."</i>	Stephen Colbert
<i>"I am late to the party but I am a supporter of Bitcoin."</i>	Elon Musk
<i>"Bitcoin was probably rat poison squared."</i>	Warren Buffett
<i>"[Cryptocurrencies] are really vehicles for speculation."</i>	Jerome Powell

I Introduction

It is not unusual to have divergent opinions on the soundness and promise of various investments, but since its inception in 2009, Bitcoin has been a genuine outlier in generating polar assessments ranging from embracing it (Musk) to treating it as a poison (Buffett). Bitcoin and other cryptocurrencies have been touted by some as a potential alternative to traditional currencies, a hedge against inflation, and a high-risk, high-reward investment. Former Fed Chair Jerome Powell and others view it as just the most recent example of a highly speculative asset. Using a series of large quantitative surveys of US households, we study the prevalence of crypto-ownership among US households, the reasons some households choose to hold Bitcoin and others don't, the perceived risks and benefits of cryptocurrency as an investment, and the effects of crypto price volatility on the spending decisions of its investors. Because we measure beliefs with respect to other financial assets such as stocks and gold as well, our results speak to whether households perceive crypto differently than they do other financial assets. We also provide new causal evidence on how information about past returns affects the investment decisions of households, with respect to both cryptocurrency and other financial assets. Our findings ultimately suggest that Bitcoin is more than just gold for nerds, as Stephen Colbert quipped.

We rely on a quarterly survey of US households participating in the Nielsen Homescan Panel running since 2018. Starting in 2021, we began incorporating a wide range of questions focusing on households' expectations about financial assets, especially with respect to cryptocurrencies. These questions focus on identifying households that own crypto, the types of crypto they own, their reasons for holding crypto, and their expected returns for different assets while asking a parallel set of questions of those that did not own crypto at the time of the survey. Unlike with other surveys focusing on cryptocurrency, we ask quantitative questions and do so with a *large representative* sample of US households, providing an unprecedented look into the beliefs shaping the investment decisions of households with respect to both crypto and other financial assets.

We identify a number of stylized facts regarding cryptocurrency ownership, some of which confirm earlier evidence but most of which are, to the best of our knowledge, new. First, we confirm other surveys showing that the share of people owning any cryptocurrency rose sharply between 2021 and 2022 (when Bitcoin prices were rising) from around 3 percent to 11 percent. As Bitcoin prices fell precipitously thereafter, the share of people holding any crypto rose further to 12 percent. The share of crypto owners subsequently fell by around 2 to 3 percentage points, but when the price of Bitcoin surpassed \$120,000 in 2025, the share recovered to around 12 percent. Those holding cryptocurrencies are different from the average population: disproportionately male with higher incomes, libertarian or otherwise politically independent, less likely to be white, and, most important quantitatively, young. While most individuals owning cryptocurrencies report that these holdings are a small fraction of their financial wealth, almost 20 percent report that cryptocurrency accounts for at least 50 percent of their financial holdings. Furthermore, the large majority of crypto holders are either happy with their crypto holdings or would like to hold more crypto as a share of their wealth. While Bitcoin is the most commonly held cryptocurrency, most individuals who own crypto own multiple currencies (with Ethereum and Dogecoin being the next most popular).

Why do these individuals buy cryptocurrencies while others don't? One might expect younger investors to naturally be more likely to hold a high-risk, potentially high-return asset than older investors given the different time horizons of their investment objectives. Differential asset holdings could also reflect different beliefs about the expected return and risk of the asset. Finally, given its digital nature, older investors might be less aware and less at ease investing in crypto. As a first pass to understand the decision to hold crypto as an asset, we elicited respondents' reasons for their choice. Crypto holders most commonly justify their decision by citing the high expected returns of cryptocurrency, followed by a desire for a diversified portfolio. Other commonly cited reasons include holding crypto as a store of value and a desire to support the development of cryptocurrencies. Interestingly, the share of crypto holders who cite holding crypto to hedge against inflation somewhat decreased between surveys in 2021 and 2025 but is still mentioned by 11 percent despite crypto's poor inflation-hedging properties during the surge in inflation that started in 2021. In contrast, those who do not hold cryptocurrencies generally appeal to one of two types of explanations. The first and most common is a lack of knowledge about cryptocurrency. This explanation suggests that cryptocurrency could grow further as discomfort with this new asset class fades, a question we explore using information treatments in the latter half of the paper. The second

most common set of reasons is a negative opinion about cryptocurrencies as a financial asset; for example, they are a bad investment, they are too risky, or they will not add diversification benefits relative to the existing assets in their portfolios. In other words, crypto owners and non-crypto owners have heterogeneous beliefs about crypto as a financial asset.

To explore this source of differential financial choice in detail and whether it differs from what we see with other financial assets, we rely on the fact that we asked households about their expected returns to different assets, such as stocks, bonds, and gold. Households that say they know little about cryptocurrencies (40 percent of households that do not own crypto) often are unwilling to provide quantitative forecasts of crypto returns (almost 90 percent of these households). For other households, however, we can confirm quantitatively that those that own crypto and those that do not indeed have very different beliefs about the future performance of this financial asset class. For example, when asked to report expected future returns for Bitcoin in, for example, 2021Q3, crypto owners reported an average expected return of 22 percent for the next year, whereas non-crypto owners reported an expected return of 7 percent.

These differences in beliefs parlay into differences in investment decisions. Consistent with portfolio theory but surprising given the empirical evidence in Giglio et al. (2022), the expected return to cryptocurrency significantly exceeds that of all the observable characteristics of individuals combined in accounting for the variation in crypto ownership. Other expectations and risk also matter: accounting for the perceived riskiness of cryptocurrency as well as for the expected returns and riskiness of other asset classes helps further explain why some individuals hold cryptocurrency and others don't. Combined, these expectations have approximately twice as much explanatory power as all of the detailed individual characteristics that we observe in terms of explaining decisions to hold crypto assets. Furthermore, these decisions are not innocuous. Changes in the price of Bitcoin affect crypto holders' subsequent spending decisions about durable goods of in proportion to the share of their financial wealth that is held in the form of cryptocurrency.

Is cryptocurrency unique in these respects or, as Colbert quipped, is it like any other asset but just targeted more toward certain types of young people? In many respects, we find that cryptocurrency is, in fact, quite different. First, it is unique in the extent to which most individuals are uninformed about it: the share of people who are unwilling to even hazard a guess for the

expected return is higher for crypto than for any other type of asset.¹ Second, those who make predictions about future returns do so in ways that differ substantially from what we observe for other assets. For example, while owners of cryptocurrency are much more optimistic about future crypto returns than those who hold no cryptocurrency, no such pattern arises for other assets. Whether we look at bonds, stocks, or gold, those who hold each respective asset have the same average expected return for that asset as those who do not.

We also find that the expected returns for other assets are much weaker predictors of whether people hold an asset relative to fundamentals than is the case with cryptocurrency. For every non-crypto asset class, observables have more explanatory power than expected returns in accounting for who owns particular assets. Even along the dimension of passthrough into spending, crypto differs from more conventional assets. While the passthrough into durable goods purchases is broadly in line with that of other assets, the passthrough into spending on non-durables is effectively zero, a finding strongly at odds with what we observe for stocks and bonds. In this sense, crypto gains seem to be perceived more like lottery winnings (and therefore spent on one large purchase) rather than a persistent increase in wealth (which gets spread out over time in non-durable spending). Jointly, these results indicate that cryptocurrency has a unique place among current financial assets, perhaps as a result of how new it is and how uninformed most individuals remain about it.

Given these patterns, one might expect that providing information about cryptocurrency to survey participants could have meaningful effects on their decisions as to whether they should hold this asset and how much of it to hold. By applying information treatments to randomly selected groups of survey respondents, we confirm this conjecture. When individuals are told about cryptocurrency returns over the past year, they raise the desired share of cryptocurrency in their portfolio, usually at the expense of other accounts (cash/checking/savings), and are more likely to own cryptocurrency in subsequent waves. This effect is particularly pronounced for those individuals who initially said they owned no cryptocurrency because they did not know much about it. This result is consistent with one mechanism through which bubbles may arise: high rates of return for a new speculative asset lead new investors to expect similarly high rates in the future and

¹ The lower share of respondents who are willing to express a view on the expected returns of crypto might be due to a general unawareness of this asset class. This lack of awareness might be due to the relative novelty of crypto as compared to the other asset classes we study or due to its digital nature, among other possible determinants.

help draw in a growing number of new investors seeking similarly high returns. In addition, we find that households tend to not only increase the amount of cryptocurrency they would like to hold in their ideal portfolio, but they also tend to increase the desired share of stocks. This increase in the desire to hold different kinds of high-risk assets is consistent with other evidence in Hackethal et al. (2022). In contrast, information about stock returns has little detectable impact on desired portfolio shares, perhaps because these returns are already better known by households. These results therefore broadly confirm our earlier evidence, but in a causal setting through randomized information treatments.

Our results build on several literatures. One is a small but growing literature on cryptocurrency as a financial asset. Haerdle et al. (2020) define cryptocurrencies and provide an overview of areas for future research in financial economics, whereas Harvey et al. (2022) provide an overview for investors on how to obtain exposure to cryptocurrencies. Early surveys that focused on crypto ownership relied on convenience samples (see Steinmetz et al. 2021). Various financial and policy institutions then ran larger surveys of households to determine who holds cryptocurrency and why (e.g., Steinmetz et al. 2021; Auer and Tercero-Lucas 2022; Faverio and Massarat 2022; JPMorgan Chase 2022; Board of Governors of the Federal Reserve System 2022; Benetton and Compiani 2024). Relative to this prior work, we contribute by having repeated waves with *much larger cross-sections* and a *panel dimension*, a broader range of not only qualitative but also *quantitative* questions on holdings and expectations, as well as a *randomized controlled trial* (RCT) to establish causality. Another branch of this literature has studied the properties of cryptocurrency as a financial asset either through high-frequency analysis of crypto prices around policy announcements (Benigno and Rosa 2023), time series analysis (Liu and Tsyvinski 2021; Liu, Tsyvinski, and Wu 2022; Guler 2023) or the trading decisions of individuals (Hackethal et al. 2022). Kogan et al. (2024) show for a large sample of retail traders that investors in crypto follow momentum strategies even though they are contrarian investors in stocks and gold. They also find, similar to our results, that observables explain only a small share of the variation in crypto ownership. Aiello et al. (2023) use transaction data on bank accounts and credit cards and U.S. crypto trading platforms and exchanges to study the cryptocurrency investment decisions of individuals in the US. Relative to these studies, we can combine information on a rich set of demographics, the expected returns, expected inflation, and asset holding decisions of households

to study their association in the cross-section as well as causally through an RCT. Moreover, we can contrast investors in crypto with non-investors and delineate commonalities and differences.

In emphasizing the role of beliefs in the portfolio decision-making of individuals, our paper builds on recent work in the behavioral finance literature that has stressed the importance of subjective expectations in shaping financial decisions. Giglio et al. (2022), for example, use a survey of investors for a large registered investment advisor, which is mapped to their investment decisions, to document an association between beliefs about returns and the portfolio decisions of investors, an association that is, however, an order of magnitude smaller than traditional portfolio theory suggests, possibly due to frictions and constraints. Giglio et al. (2021) do a similar analysis over time during the COVID-19 stock market crash. Bordalo et al. (2024) show that measures of expected long-run earnings growth help explain several stock market puzzles. The role of expectations has also been documented for, for example, exchange rates (Valente, Vasudevan, and Wu 2022) and managerial decisions (Barrero 2022). Recent work has begun using causal identification to establish that expectations directly affect portfolio decisions, either through quasi-experiments (e.g., Meeuwis et al. [2022] use the 2016 presidential election to study the differential portfolio decisions of Republicans and Democrats) or through RCTs that create exogenous variation in beliefs to assess how these affect the portfolio decisions of households (Weber et al. 2026; Beutel and Weber 2026). We complement this prior work by using similar methods to study the crypto holding decisions of households as well as how beliefs about crypto compare to those about more traditional financial assets.

Finally, our paper is part of a broader literature that studies how the expectations of households causally shape their economic decisions. While our paper focuses on the portfolio allocation decision, other related work studies how household expectations affect spending, labor supply, and wage bargaining decisions. For example, Coibion et al. (2022) use RCTs to show that exogenous changes in the inflation expectations of households affect their subsequent spending decisions, while Coibion et al. (2024) document that RCT-generated changes in the macroeconomic uncertainty perceived by households also affect their subsequent spending on both non-durables and durables. Hajdini et al. (2022) and Pilossoph and Ryngaert (2022) study labor supply decisions and inflation expectations, while Mitra (2022) considers how macroeconomic sentiment affects labor search decisions.

We make three main contributions to the literature. First, we provide evidence on the drivers of crypto investments, how investors’ views on crypto differ from their views on other asset classes, and how movements in the price of cryptos spill over into investors’ consumption decisions. The literature so far has been unable to differentiate investors’ views on crypto from those on other asset classes. Second, we study a large representative sample of the US population, which allows us to contrast investors with non-investors and discuss why some Americans invest in crypto and why many Americans so far have shied away from crypto investments. Naturally, the reasons why investors in our representative sample invest in crypto might differ from the motives in other countries in which distrust of the domestic currency and financial system might be a more important determinant. Third, we show that providing information on the returns of cryptos causally shapes individuals’ views on future crypto returns, especially for those who previously did not invest in crypto, and subsequent investment in crypto. To the best of our knowledge, our paper is the first to establish a causal link between expected crypto returns and investment in cryptos.

II Data Description

To study the portfolio decisions of households, and their ownership of cryptocurrency in particular, we rely on a series of quarterly surveys of US households run since 2018Q1. Respondents come from the Nielsen Homescan Panel, a group of approximately 80,000 households that track their individual purchases at the UPC level. Through their participation in the Nielsen panel, households provide extensive demographic information. Nielsen allows firms and researchers to run surveys of this broadly representative collection of households, and we have been doing so on a quarterly basis since 2018Q1. Response rates are generally 20-25 percent, yielding anywhere between 15,000 and 25,000 respondents per survey wave. There is a panel dimension to the survey, but since participation is voluntary and respondents can opt out of future surveys if they find them too difficult, this panel dimension is somewhat limited. On average, approximately 60 percent of each survey’s respondents participated in the previous wave.

From 2018Q2 until 2018Q4, all participants were asked about their asset holding decisions:

What percent of your financial wealth (excluding housing) do you invest in the following categories? Put “0” if you do not invest in a given category.

	Wealth Investment Allotment
<i>Checking and Savings Account, Certificate of Deposits</i>	_____percent
<i>Cash</i>	_____percent
<i>US Bonds</i>	_____percent
<i>US Stocks</i>	_____percent

<i>Foreign Stocks and Bonds</i>	_____ percent
<i>Gold and precious metals</i>	_____ percent
<i>Bitcoin and other cryptocurrencies</i>	_____ percent
<i>Other</i>	_____ percent
<i>Total</i>	<u>100</u> percent

From 2019Q1-2020Q4, participants were first asked if they had financial investments worth at least one month's worth of household income and, if they answered yes (51 percent did on average), they were then asked this same question about their financial portfolio. This question was discontinued in 2021Q1. More details on households' financial decisions were collected in 2021Q3, 2022Q3, and 2025Q2, along with their respective follow-up waves. In each wave, respondents were specifically asked whether they owned any cryptocurrency. Respondents then received a set of follow-up questions depending on whether they stated that they owned cryptocurrency. For those who owned cryptocurrency, they were asked why they held cryptocurrency, by selecting from a predetermined list (in randomized order), and then ranking their selected reasons in order of importance. They were also asked about the share of cryptocurrency in their financial holdings:

How large is the share of your financial portfolio in cryptocurrencies at the moment? Please express the dollar value of your cryptocurrency holdings as a percentage of your combined checking/savings/retirement/CDs/other liquid financial assets (do not include housing).

Cryptocurrency accounts for _____ % of my financial portfolio.

☐ *Prefer not to say*

☐ *I don't know*

In the 2021Q3, 2022Q3, and 2025Q2 waves, an additional set of questions was asked of those who held cryptocurrency. For example, they were asked which types of cryptocurrency they owned, selecting from 10 possible cryptocurrencies. They were also asked if they planned to purchase more cryptocurrency in the future:

In the next 6 months, do you plan to purchase more cryptocurrency in total, keep your holdings as they currently are, or sell cryptocurrency in total? (Select one)

☐ *Purchase more cryptocurrency overall*

☐ *Keep my holdings of cryptocurrency the same*

☐ *Sell cryptocurrency overall*

☐ *Prefer not to say*

☐ *I don't know*

For those who said they planned to purchase more cryptocurrency, they were asked how much:

How much more cryptocurrency do you plan to buy in the next 6 months? Please express the percentage increase relative to your cryptocurrency holdings.

I plan to increase my cryptocurrency holdings by _____ % in the next 6 months

☐ *Prefer not to say*

☐ *I don't know*

Those who said they planned to sell cryptocurrency over the next six months were asked an equivalent question, but about the amount they wanted to sell. Finally, those who owned cryptocurrency were asked about their longer-term plans for their crypto holdings (ideal portfolio allocation in two years).

For respondents who said they did not own any cryptocurrency, the 2021Q3, 2022Q3, and 2025Q2 waves included a primary follow-up question eliciting the reasons for not holding crypto from a predetermined list of options presented in randomized order, followed by a question asking them to rank their selected reasons in order of importance.

In addition to these questions focusing on cryptocurrency ownership, all participants were asked other questions focusing on their views about different types of financial investments. First, we inquired about their expected returns:

What approximate rate of return do you expect to see for each of the following assets in the next 12 months?

US Stocks: _____ % ☐ *Don't know*

US Bonds: _____ % ☐ *Don't know*

US Savings Account: _____ % ☐ *Don't know*

Cryptocurrency: _____ % ☐ *Don't know*

US Housing: _____ % ☐ *Don't know*

Gold: _____ % ☐ *Don't know*

Respondents were then asked about their perceptions of risk for each asset class:

Please rate how risky you perceive each of the following assets to be over the next twelve months on a scale of 1 (very safe) to 5 (very risky):

US Stocks: _____ ☐ *Don't know*

US Bonds: _____ ☐ *Don't know*

Savings Account: _____ ☐ *Don't know*

Cryptocurrency: _____ ☐ *Don't know*

US Housing: _____ ☐ *Don't know*

Gold: _____ ☐ *Don't know*

In each of these questions, the ordering of the financial assets was randomized.

In addition to these questions, the survey in 2025Q2 included information treatments that were randomly assigned to survey participants.² We will describe these in Section V. Following the information treatments, all respondents (including those in the control group) were presented with some final follow-up questions. The goal of these questions was to assess whether the information treatments led respondents to change their views, but without asking identical questions as earlier in the sample.³ To do so, we asked respondents about their ideal future portfolio allocation. The question read:

By the end of 2025, how would you ideally like to see your financial wealth (excluding housing/real estate) allocated across the following assets? Please provide a percentage for each asset class. The total should sum to 100 percent.

Stocks: _____ %
 Bonds: _____ %
 Cryptocurrency: _____ %
 Gold/precious metals: _____ %
 Cash/Checking/Savings: _____ %
 Total: _____ 100 %
☐ *I don't expect to have any financial assets*

In addition, we asked the following question to reassess expected returns for different assets as well as their perceived riskiness:

We would like to know how you think different assets might evolve over the next year. There is no right or wrong answer to this. For each of the following assets, please tell us what you think is the most likely rate of return over the next twelve months, as well as the lowest and highest rates of return that we might see over twelve months.

	<i>Lowest rate of return</i>	<i>Most likely rate of return</i>	<i>Highest rate of return</i>	<i>I don't know</i>
<i>US Stocks</i>	%	%	%	☐
<i>Cryptocurrency</i>	%	%	%	☐
<i>Gold</i>	%	%	%	☐
<i>GameStop</i>	%	%	%	☐

III Who Owns Crypto and Why?

² In an earlier version of this paper, we described randomized controlled trials conducted in the 2021Q3 and 2022Q3 waves. In each wave, we included 18 treatments. The large number of information treatments resulted in small samples and hence low statistical power. We conducted another RCT in 2025Q2, reducing the number of treatments to 7. For that reason, we focus exclusively on the 2025Q2 RCT results below.

³ The purpose of asking a different question format before and after information provision is to alleviate survey fatigue and experimenter demand effects (Coibion et al. 2022). De Quidt et al. (2018) show that experimenter demand effects tend to be small in settings like ours.

We first consider the prevalence of cryptocurrency ownership in our sample over time. Figure 1 presents the time-varying share of the sample that reports owning cryptocurrency from different samples. In the 2018 surveys, all households were asked whether they owned cryptocurrency. The ownership rate was less than 2 percent at that time. From 2019 through 2020, respondents who reported that they held financial investments worth at least one month of their household income were the only ones who were asked whether they held any cryptocurrency. Around 4 percent of these households reported holding cryptocurrencies, with the fraction gradually increasing over the sample period. In the 2022 and 2023 survey waves, we can measure the share of crypto ownership among both groups. We observe that in 2022, the fraction of all households owning crypto was 11 percent, far higher than the 2 percent share in 2018. When we look at those with at least one month's worth of income in financial assets, the share rises to around 13 percent in 2022. Thus, a large increase in the share of crypto ownership occurred during the period when Bitcoin prices increased significantly. But even as the price of Bitcoin fell sharply in 2022, the fraction of people owning crypto increased further, reaching approximately 12 percent by the middle of 2023.

These results accord with those of other surveys that elicited information on crypto ownership for the general population. A Pew Research Center survey in July 2022 reported that 16 percent of its respondents had, at some point, owned or traded cryptocurrency. Similarly, a JPMorgan Chase (2022) study of cryptocurrency found that almost 15 percent of US households had, by mid-2022, conducted transfers into crypto accounts. A Federal Reserve System Board of Governors survey of households in 2021 found that 12 percent of Americans held or had owned cryptocurrency in the last 12 months.

In the rest of this section, we study in more detail who chooses to own cryptocurrency, why they do so, and why other Americans choose not to. We consider how their beliefs about asset returns shape these decisions and how changes in cryptocurrency affect their spending decisions.

III.A Who owns what and how much?

One of the advantages of surveys run on Nielsen Homescan participants is that far more information about these individuals is available than is commonly found in surveys. Nielsen gathers detailed demographic information about all of the household members and this information is available to us, in addition to the detailed questions included in our survey. We can therefore explore how these characteristics are related to the choice of whether to own cryptocurrency. In

Table 1, we present results from regressing an indicator variable for cryptocurrency ownership in 2021Q3 on a wide range of observable characteristics of households.⁴

Several results stand out. First, men are more likely to hold cryptocurrency than women, although the gender difference is not very large (4 percentage points). Second, higher income, higher spending levels, being employed, and financial wealth that exceeds one month's worth of household income are all positively correlated with cryptocurrency ownership. Third, no significant correlation exists between education and the ownership of cryptocurrency once we control for other observables. Fourth, white individuals are somewhat less likely to own cryptocurrency, consistent with survey evidence by Ariel-Schwab (2022) and Bradford (2022). Fifth, an ideological component to cryptocurrency ownership is present: libertarians and independent voters are more likely to hold crypto. Sixth, those who received larger stimulus checks are more likely to hold cryptocurrency, consistent with findings from the Harris Poll (Rosanwo 2021), Divakaruni and Zimmerman (2024), and Aiello et al. (2023). Finally and most importantly in a quantitative sense, age is a strong predictor of crypto ownership even after taking into account all these other factors: those under 40 are 13 percentage points more likely to own cryptocurrency than those over 60. This result could reflect different forces. For example, apart from being more comfortable with digital technologies, the young should be more willing to hold a high-risk but potentially high-return asset than those with shorter investment horizons. Another explanation could be that the young hold different beliefs about expected crypto returns or the riskiness of cryptocurrency as a financial asset, a question we return to in Section III.B.

To visualize the intensive margin of investment in crypto, Panel A of Figure 2 plots the distribution of the actual financial portfolio share of cryptocurrency from the 2021Q3 wave. For most respondents, crypto represents a small share of their financial portfolios: 70 percent of crypto owners hold less than 15 percent of their financial holdings in cryptocurrency and 40 percent hold less than 5 percent of their holdings in crypto. But for some, cryptocurrencies represent a large fraction of their holdings: about 20 percent of households hold more than half of their financial

⁴ We focus on 2021Q3 wave results because we want to compare cryptocurrency with other financial assets, such as stocks, bonds, and gold, and households reported decompositions of their financial portfolios only through 2020Q4. Online Appendix Figures B2-B4 report results equivalent to Figures 2-4, respectively, using the 2025Q2 wave. The results are similar across waves. To be clear, when we study households' cryptocurrency investment decisions and motives relative to other financial assets, we focus on the 2021Q3 wave. When we study how information treatments affect households' desired portfolio allocation and cryptocurrency purchases, we focus on 2025Q2 waves.

portfolio in cryptocurrency. The average crypto share across all households that own any cryptocurrency is 19 percent. Furthermore, of those who own cryptocurrency, 41 percent report that they would like to own more, 30 percent would like to keep their portfolio as is, and only 4 percent plan to sell crypto.

What kinds of cryptocurrency are these households buying? While Bitcoin is the most well-known cryptocurrency, there are many other currencies such as Ethereum, Litecoin, and Dogecoin, among others.⁵ We asked households to report which cryptocurrencies they own and report the results for the 2021Q3 wave in Panel B of Figure 2. Not surprisingly, the most popular cryptocurrency is Bitcoin. The next two most common types of cryptocurrencies are Dogecoin and Ethereum, both of which are held by over 40 percent of people who own any cryptocurrency. The choice of these three currencies as the primary ones held by households is suggestive that one primary motive of holding crypto is earning high rates of return by investing in the most well-known cryptocurrencies. Other cryptocurrencies were created to fill more niche roles, such as being stable relative to the dollar (Tether), to have faster transaction times than Bitcoin (Litecoin), to allow fast money transfer across countries with low transaction fees (Stellar), or to facilitate anonymous transactions (Monero). Their much lower prevalence in household “crypto wallets” suggests that these roles are not a primary determinant of why households purchase cryptocurrency.

III.B Why do some people buy crypto and others don’t?

We report in Panel A of Figure 3 the primary reasons why some households choose to hold cryptocurrency, as reported in the 2021Q3 wave. The two most common reasons by far are in terms of cryptocurrency being a financial asset: high expected returns and portfolio diversification, which we interpret as being about a perceived low covariance of Bitcoin returns with returns of other assets. Following this investment motivation are three other rationales. One is that cryptocurrency works as an inflation hedge (“protect against inflation” and “store of value”). The second is more ideological (“support the development of cryptocurrency” and “being independent of banks”). The third involves its use for transactions (“anonymity of purchases” and “international transactions”). Overall, we interpret these answers as indicating that for many crypto owners, the

⁵ Online Appendix Table B5 provides basic facts about the cryptocurrencies.

primary function of these assets is as an investment device that provides high potential returns, low correlation with other financial assets, and an inflation hedge.

When asked why they choose not to hold any crypto, non-crypto owners provide two main types of responses, as illustrated in Panel B of Figure 3. The first and most prevalent type of response is a lack of knowledge about crypto (“don’t know enough,” “don’t know what it is,” and “don’t know how to buy it”). This rationale suggests that, if these individuals were to receive information about crypto, they might then choose to invest in it. The second most common type of explanation is the opposite view of that mentioned by crypto owners, namely, that it is undesirable as an investment tool (“bad investment,” “too volatile,” “no fundamental value,” and “happy with current portfolio”). This explanation suggests that at least some non-crypto owners hold a very different view about the characteristics of crypto as a financial asset compared to crypto owners, namely, that its expected returns are low, it is risky, and it does not provide diversification value relative to existing portfolios. A third, but much smaller category, is financial constraint (“don’t have the money to buy it”).

How pronounced are these differences in beliefs about crypto as a financial asset? To answer this question quantitatively, we use the fact that we asked respondents to provide expected returns for cryptocurrencies in a quantitative manner, as well as other assets, in 2021Q3. However, many respondents were unwilling to provide answers to these questions. The share of respondents choosing “I don’t know” when asked to provide quantitative forecasts of returns for cryptocurrency over the next 12 months was 87 percent for those not holding cryptocurrency and 54 percent for crypto owners. For those who provided expected returns, we plot the distribution of these returns in Panel A of Figure 4 for those holding cryptocurrency and those who did not. A clear difference in expected returns across groups is present. First, the average expected return for those holding cryptocurrency is much larger than what non-crypto owners predicted: 22 percent vs. 7 percent.⁶ The distribution of responses for crypto owners is also more dispersed, with many reporting expected returns of 40 percent, 50 percent, and even 100 percent over the next year (100 percent was the maximum allowable response). In contrast, about 50 percent of non-crypto owners report an expected return of around zero. Across both groups, very few respondents predicted negative

⁶ Even in the 2025 survey wave, we find similar, albeit somewhat smaller, differences in expected returns by crypto ownership status. Crypto owners expected a return of 13.8 percent over the next 12 months, whereas non-owners only expected a return of 4.7 percent. See Online Appendix Figure B4.

rates of return. Panel B of Figure 4 plots the implied uncertainty around point forecasts of respondents. Here, we see that those holding cryptocurrency display larger uncertainty around their predictions than non-crypto owners. Panel C of Figure 4 plots qualitative perceptions of the riskiness of cryptocurrency across the two groups. Many non-crypto owners are uncertain about the riskiness of this asset, but among those willing to provide an answer, around 63 percent assign it the highest risk level, whereas only around 45 percent of crypto owners who provide a risk measure rate it at the highest risk level. While crypto owners therefore are willing to acknowledge a lot of uncertainty in just how positive crypto returns will be, they tend to perceive the asset as less risky than those who do not own cryptocurrency. In short, these results confirm that crypto owners and non-crypto owners have different perspectives on the expected returns and risk associated with investing in cryptocurrency.

How important are these differences in explaining whether individuals choose to hold cryptocurrencies relative to the observable characteristics of individuals in Table 1? We consider a “horserace” of the two types of explanations in Table 2. In column (1), we report the R^2 from regressing an indicator variable for crypto ownership on all the observables we use in Table 1 for the subset of individuals who provided quantitative expected returns for different financial assets. Despite the large number of these characteristics, their combined explanatory power is relatively small, less than 0.09.

In column (2), we instead regress the same indicator variable for crypto ownership on a single independent variable: individuals’ expected rate of return for cryptocurrency. The estimated coefficient is close to 0.8, indicating that each additional percentage point in expected returns is associated with a 0.8 percentage point higher probability of an individual owning cryptocurrency. The R^2 of this regression is 0.106; so this single expectation explains more variation in the decision of whether or not to hold cryptocurrency than all of the observable characteristics of individuals combined. Column (3) controls for the perceived riskiness of cryptocurrency. While the coefficient has the expected sign (higher perceived risk of crypto lowers the probability of buying crypto), its quantitative effect is relatively small, with an R^2 of just 0.013. Column (4) controls for both expected crypto returns and their perceived riskiness, leading to an R^2 of 0.11. In column (5), we include expected returns and perceived riskiness of all other assets. Some of the effects are statistically significant and go in the expected direction: for example, higher expected returns to other assets lowers the probability of holding crypto, whereas higher perceived risk of other assets

raises the probability of holding crypto. Their combined explanatory power is non-trivial, with the R^2 rising to 0.15. These expectational variables therefore explain almost twice as much of the variation in decisions to hold crypto as observable characteristics. When we combine expectations and observables, the R^2 rises to 0.21 and none of the estimated coefficients change much. Thus, while observable characteristics of individuals play some role in explaining who purchases crypto, differences in beliefs about returns and risk play a much more important role.⁷

One possible concern is that respondents might be providing expectations to justify their holding choices, a type of survey demand effect. There are several reasons to be skeptical of this interpretation of the results, however. First, survey demand effects are generally small in online surveys with a focus on economic questions (De Quidt et al. 2018). Second, we find that expectations about returns to other assets also help predict who holds cryptocurrency, which would require a very strong form of survey demand effects. Third, we utilize an RCT in Section V to tackle survey demand effects more directly.

III.C Do crypto price changes affect spending?

One reason why crypto ownership may be important for aggregate outcomes and policy is if the high volatility in crypto prices affects the spending decisions of households that own it. To assess the passthrough of Bitcoin price changes into spending, we first use households' reported answers as to whether or not they purchased a durable good in that quarter ($\mathbb{I}_{i,t}^{dur}$). We then regress this measure on whether they planned to purchase a durable good in the previous quarter ($\mathbb{I}_{i,t-1}^{plan}$) and their exposure to crypto price changes, defined as the share of cryptocurrency in their financial portfolio in the previous quarter ($CryptoShare_{i,t-1}$) times the (log) percentage change in the price of Bitcoin in the current quarter ($\Delta \log P_{i,t}^{Bitcoin}$). Our specification is therefore

$$\mathbb{I}_{i,t}^{dur} = \gamma \times \mathbb{I}_{i,t-1}^{plan} + \beta \times CryptoShare_{i,t-1} \times \Delta \log P_{i,t}^{Bitcoin} + \phi \times CryptoShare_{i,t-1} + \lambda_t + error \quad (1)$$

in which we pool across survey waves from 2018 to 2021.⁸ We report coefficient estimates in Panel A of Table 3 for different types of durable goods purchases. For example, the first column

⁷ The number of observations in Table 2 is less than 1,000 because we restrict our attention to individuals who provided quantitative expected returns and perceived risk for all assets. Similar results hold in columns (1)-(4) if we use the maximum sample available for each specification.

⁸ We focus on this early sample because households reported decompositions of their financial portfolios into crypto, stocks, etc. In Section IV, we consider equivalent regressions for the passthrough of price changes in these asset types into spending decisions and we focus on the common sample with portfolio shares for all asset classes.

reports whether Bitcoin price changes affected spending decisions for any durable good, combining decisions across houses, cars and big-ticket items. We find a positive coefficient, indicating that a doubling of Bitcoin prices makes a household whose financial portfolio is all in cryptocurrency 1.4 percentage points more likely to purchase a durable good than they otherwise would have been. Given that the average prevalence of durable goods purchases is about 20 percent, our estimates imply an increase of 7 percent of the unconditional likelihood of buying durable goods. The next three columns consider the effects on either house purchases, car purchases, or purchases of other big-ticket items like computers or refrigerators. The effects are largest for big-ticket items and decrease as we move to larger purchases like cars or homes. These results suggest that the volatility in cryptocurrency prices is potentially not innocuous for households that choose to be financially exposed to it, with a clear discernible passthrough into their decisions about spending on durable goods.

In column (5), we report equivalent estimates using the reported (log) non-durable spending⁹ as the dependent variable over the same time period, but using lagged spending as a control (we do not elicit planned non-durable spending in the survey). We find little passthrough of Bitcoin price changes into non-durable spending, which suggests that changes in cryptocurrency values are not necessarily viewed as persistent increases in wealth by households, as the latter would tend to feed into non-durable spending. Instead, passthrough into spending on one-time big-ticket items appears to be closer to gambling or small lottery winnings.

Panel B corroborates this interpretation. We use durable goods purchases from the subsequent quarterly survey wave and regress it again on the spending plans from the previous wave but also the portfolio share in crypto times its percentage price change from the two survey waves prior to see whether spending adjusts persistently.¹⁰ Across all outcomes, we find economically small and statistically insignificant effects of realized crypto returns on durable and non-durable purchases. Hence, realized crypto returns result only in immediate, temporary, one-off purchases of big-ticket items rather than a persistent increase in overall spending, consistent

⁹ Non-durable spending includes rent, maintenance and home owner/renter insurance, housekeeping and cleaning services (but not including mortgage payments), utilities, food, clothing, footwear, personal care, gasoline, other regular transportation costs, medical care, travel, recreation, and entertainment, education and child care, furniture, jewelry, small appliances and other small durable goods, and other spending.

¹⁰ We thank Antoinette Schoar for inspiring this analysis.

with the idea that investors consider crypto gains as gambling income rather than increases in permanent income.¹¹

IV Is Crypto Unique?

We have documented a number of novel facts about who owns cryptocurrency, how their expectations about cryptocurrency returns and risk shape their holding decisions, and the extent to which cryptocurrency price changes affect their subsequent consumption decisions. The next question we address is whether cryptocurrency is unique in these respects or if these patterns are similar for other financial assets.

We first consider the characteristics of those holding different types of financial assets and replicate the results in Table 1 for gold, stocks, and bonds (see Appendix Tables A1-A3). Gold has a number of features that are similar to crypto. As is the case with crypto, those owning gold are more likely to be men and to have higher income and wealth, are less likely to be white, and are more likely to be libertarian or politically independent. However, gold is somewhat different from crypto in that it is also more likely to be held by Republicans and more likely to be held by those who are looking for a job or who are inactive in the labor market. Most notably, whereas age strongly predicts crypto ownership, no such pattern is visible for ownership of gold. Whereas unconditionally a strong relationship between age and gold holdings is present (older individuals are more likely to hold gold as shown in Online Appendix Figure A1), this relationship disappears when conditioning on other observable characteristics. Stocks are also more likely to be held by men, higher-income and higher-wealth individuals, as well as those with higher education. Libertarians are again more likely to hold this financial asset as are whites. Those between 41 and 60 also have a higher probability of owning stocks. Bond ownership is again more likely for men and those with higher incomes, higher wealth, and higher education. Bond ownership is most likely for older households, consistent with life-cycle portfolio rebalancing (Parker et al. 2025). As with other assets, bonds are more likely to be held by libertarians. In short, across asset types, the ability to purchase financial assets, as measured through income or wealth, is an important determinant

¹¹ Consistently, in Appendix Table A4, we also find that the durable spending response is strongest among investors whose portfolio allocations of crypto are below the median. This pattern is consistent with decreasing MPCs for higher stimulus checks in Coibion et al. (2020) and with evidence from lottery winners in Norway. Fagereng et al. (2021) examine lottery winners in Norway and find an MPC of 1 for winners with small prizes and low liquidity, but only 0.50 for winners of large prizes and high liquidity.

of ownership. Men and libertarians are systematically more likely to own all kinds of financial assets. Life-cycle considerations are visible across different assets such as stocks and bonds. Thus, along many of these observable characteristics, crypto ownership does not appear to be qualitatively different other than that, because cryptocurrency is more volatile, it is more likely to be held by those with longer investment horizons.

One noteworthy finding from crypto ownership documented in the previous section was how few households were willing to provide answers for their expected returns for cryptocurrency, even among those holding cryptocurrency. Does this non-response extend to other financial assets? In Table 4, we report the frequency of respondents selecting “I don’t know” when asked to provide an expected return over the next 12 months for each type of asset. This share varies from a low of 60 percent for savings accounts to 78 percent for gold. While these non-response rates are high across the board, the 84 percent non-response rate for cryptocurrency stands out as discernibly higher. Table 4 also provides non-response rates for those holding each asset versus those not holding that asset. As one might expect, non-response rates are always higher among those who don’t own the asset. Among those holding the asset, the non-response rate of crypto owners is similar to what we observe for those holding other assets, but it is significantly higher among those not holding each asset. The high rate of non-response to expected cryptocurrency returns therefore reflects two effects. First, the crypto ownership rate is lower than that for other assets, and since ownership of an asset is correlated with being willing to provide an estimate for expected return, this accounts for some of the higher non-response rate. Second, non-crypto owners demonstrate a greater unwillingness to provide expected returns for cryptocurrency than is the case for other assets, which suggests that knowledge about this asset is particularly limited.

Among those who provide expected returns for non-crypto assets, do these expectations display characteristics similar to those for expected crypto returns? Figure 5 presents distributions of expected returns across asset types, reported uncertainty in these expected returns as well as the dynamics of asset prices and shares of ownership for each asset. With respect to the latter, we observe different dynamics for ownership shares of other assets than for cryptocurrency shown in Figure 1. For gold, stocks, and bonds, a gradual increase in the share of households owning each type of asset occurred from 2018 to 2019, with a mild reversal taking place thereafter. In contrast, crypto ownership was rising throughout this period. Expected returns also display a difference relative to cryptocurrency: the expected returns for each asset among those holding the asset and

those who do not are very similar. For example, those owning gold expected a rate of return on gold of 9.9 percent over the next 12 months in 2022Q3, whereas those who did not hold gold expected a return of 10.3 percent. In contrast, we documented that crypto owners expected a much higher rate of return for crypto than did those who did not hold any crypto.

Next, we study whether risk and return expectations or household characteristics are more important in driving holdings in other asset classes. We documented in Table 2 that, in the case of cryptocurrency, expected returns played a very powerful role in accounting for who chooses to own crypto, with a larger R^2 coming from expected returns than from a wide range of observable household characteristics combined. In Table 5, we replicate this exercise but for other financial assets, comparing the explanatory power of the same set of observables as used in Table 1 compared to the complete set of expected returns and perceived riskiness of different assets also used in Table 2. The patterns are different. Whereas the explanatory power of expected returns was twice that of observable characteristics for crypto ownership when going from column (1) to column (5) in Table 2, for other financial assets the roles are reversed: observables have an explanatory power that is generally five to six times as large as that of expected returns and perceived risk of financial assets. Thus, when one accounts for observables like income and age, there is little additional predictive power coming from differences in expected returns for explaining which assets are held by different households, except in the case of crypto.¹² For the latter, it is primarily differences in expected returns that explain who chooses to own the asset.

Finally, we consider whether asset price changes affect spending decisions in a similar manner across asset types. In particular, we estimate the same empirical specification as in Section III.C but for each of the other financial assets, with results reported in Panels C-E of Table 3. We find broadly similar results across asset types: changes in the value of an asset affect the likelihood of a household purchasing durable goods that quarter, although the effects are barely detectable for stocks. The exact passthroughs differ, with gold having the highest overall passthrough into durable goods and stocks having the lowest, with cryptocurrency being approximately in the middle of the range. Passthrough into non-durable goods spending, however, differs more: for stocks and bonds, we find clear evidence that changes in the prices of these assets affect regular

¹² In Online Appendix Tables B3 and B4, we show that qualitatively similar results hold when we compare the role of observables and expected returns in explaining the actual portfolio shares of different assets (Online Appendix Table B3) and desired portfolio shares (Online Appendix Table B4).

spending decisions. In contrast, gold and crypto price changes only affect durable goods purchases. In this spirit, price changes in the latter two assets are probably perceived more like lottery winnings, whereas stock and bond price changes are perceived as more persistent and induce wealth effects that are reflected in non-durable goods spending (Di Maggio et al. 2020).¹³

In short, along some dimensions, cryptocurrency is a “normal” asset. For example, many of the observable characteristics that predict crypto ownership (such as income and wealth) also predict ownership of other financial assets. While the young are more likely to own cryptocurrency, this is not inconsistent with life-cycle investment decisions that are also observed for stocks and bonds. The passthrough of crypto price changes into spending also appears to be in line with what we observe for some other financial assets, especially gold, in that it primarily affects spending on durable goods.

However, along many dimensions, cryptocurrency really does stand out. First, significantly less knowledge exists about it than about other assets. Second, when households learn about it, they seem to form different opinions about it as a financial asset, a point we investigate more with information treatments in Section V. Differences in expected returns for crypto are much more pronounced between those who hold the asset and those who don’t. Those differences in expected returns play a very large role in explaining which households choose to buy cryptocurrency, whereas for other assets differences in expected returns play a much more muted role.

V The Role of New Information on Crypto Holdings

Given that cryptocurrency is unique in how uninformed most households are about it, one might expect that communicating information about it to households could have pronounced effects on decisions about whether to hold the asset. To assess this hypothesis and causally relate expected returns to the holding of crypto assets, we implemented randomized information treatments in 2025Q2. Households were randomly assigned to either a control group that received no information or to one of six treatment groups that received different pieces of information. Treatments, as described below, involved receiving information on past-year returns for Bitcoin, stocks, and GameStop (a highly speculative, meme-driven stock characterized by intense volatility, high-risk, and trading sentiment), presented in text or visual form. We also include the

¹³ Panel F of Table 3 reports results including all asset price changes. We still find that Bitcoin price movements affect the decision to buy any durable good, but the individual goods' effects become insignificant, also because the likelihood of buying any given durable good is low (around 2 percent for homes, 8 percent for cars, and 12 percent for big items).

FOMC's inflation forecast treatment to evaluate how information about inflation affects desired portfolio shares and crypto purchases.¹⁴ In this section, we describe the information treatments, then present results on how these treatments affect individuals' asset return expectations, the likelihood of holding cryptocurrencies, and finally the desired portfolio allocation across different asset classes.

V.A Information treatments

Participants were randomly assigned to different groups of approximately equal size. The control group was not provided with any additional information and instead moved straight to follow-up questions. All other groups received some type of information. These treatments involved receiving information on past-year returns for Bitcoin, stocks, and GameStop, presented in text or visual form. The corresponding values for treatments in text form were returns over the past 12 months of 14.3 percent for Bitcoin, 9.7 percent for stocks (as measured by the S&P 500), and 60.11 percent for GameStop. The visual treatments plot the daily closing price of each asset over the previous 12 months. The inflation treatment provided information on the FOMC's inflation forecast, which was 2.5 percent.

V.B Average effect on asset return expectations

To assess how information treatments affect average asset return expectations, for each asset (cryptocurrency, US stocks, GameStop), we follow Coibion et al. (2022) and Bernard et al. (2026) and we regress the change in agents' return expectations from before to after the information treatment on a dummy variable for their treatment group, that is,

$$E_i^{post}r - E_i^{pre}r = \alpha + \sum_{j \in J} \beta_j \mathbb{I}_{i,t}\{i \in Treatment\ j\} + \gamma X_i + error_i, \quad (2)$$

where $E_i^{post}r$ is the posterior return forecast of individual i , $E_i^{pre}r$ is their prior return belief, $\mathbb{I}_{i,t}\{i \in Treatment\ j\}$ is an indicator variable for household i being in treatment group j (where J denotes the set of all treatment groups), and X_i is a vector of household control variables. Posterior beliefs are measured with a point forecast question about the most likely rate of return over the next 12 months, whereas prior beliefs are measured using the implied mean from a distributional

¹⁴ In an earlier version of this paper, we reported results from randomized controlled trials conducted in 2021Q3 and 2022Q3. In each wave, we included 18 treatments, grouped into the following broad categories: inflation treatments, long-run return treatments, short-term return treatments, volatility treatments, and visual treatments. The large number of information treatments prevented us from obtaining robust, consistent results. For that reason, we conducted another RCT in 2025Q2, reducing the number of treatments to 7.

question in which individuals report probabilities to pre-specified bins of possible asset returns over the next 12 months.¹⁵ Using different question formats to elicit priors and posteriors alleviates concerns of experimenter demand effects but necessitates including the control group, which helps capture any effect that arises due to the different wording. Note that β_j should be interpreted as the average effect of receiving the corresponding information treatment j on individual asset return expectations relative to the control group. Table 6 reports the results of β_j .

Consider first the past return Bitcoin treatment. Households in this group were told that the Bitcoin return over the past 12 months was 14.3 percent. The average respondent in this group increases their forecast by 3.2 percentage points relative to the control group. The Bitcoin visual treatment also led households in this group to raise, on average, their cryptocurrency return expectations by 1.2 percentage points relative to the control group. When we analyze GameStop treatments, we observe a similar pattern: both text and visual treatments led households to increase their GameStop return expectations, with a stronger effect for the text treatments (4.3 pp vs. 1.5 pp). We also find some evidence on cross learning or that households perceived a positive correlation between cryptocurrency returns and GameStop returns, since Bitcoin treatments raise GameStop return expectations and GameStop treatments raise cryptocurrency return expectations. Moreover, Bitcoin and GameStop treatments tend to raise US stock return expectations, but the magnitudes are generally smaller. In contrast, only the past return S&P treatment affects expectations about US stocks, leading households in this group to reduce their forecast by approximately 1 percentage point relative to the control group. This result is consistent with households being generally better informed about stocks than about newer assets like cryptocurrency or lottery and meme stocks like GameStop. Finally, we find no significant effects of the inflation treatment on any of the analyzed assets.

V.C Information treatments and ownership

¹⁵ Appendix Figure A1 presents distributions of expected returns across asset types (top panel) and implied uncertainty (bottom panel) derived from the distributional questions. Notice that the individual expected uncertainty for Bitcoin and GameStop are very similar, and also both are very similar to the implied uncertainty for the annual returns of the S&P 500. Therefore, the differences in cryptocurrency expected returns between crypto holders and non-crypto holders reported in Section III.B cannot be explained by higher dispersion in beliefs relative to other traditional assets, such as stocks.

We focus on the effects of information treatments on two outcomes. One is the decision to hold cryptocurrency. For this outcome, we assess whether being provided with information affected the probability of a respondent owning any cryptocurrency in the next wave. In other words, we run the following regression:

$$\mathbb{I}_{i,t+1}^{crypto} = \alpha + \delta \mathbb{I}_{i,t}^{crypto} + \sum_{j \in J} \beta_j \mathbb{I}_{i,t} \{i \in Treatment\ j\} + \gamma X_i + error \quad (3)$$

where $\mathbb{I}_{i,t+1}^{crypto}$ is an indicator variable for whether household i owned any cryptocurrency in wave $t + 1$. We control for whether a household owned any cryptocurrency in the wave during which we administered the information provision experiment, which helps identify changes in cryptocurrency ownership due to the treatments (Coibion et al. 2024). Second, we consider how information treatments affect the desired portfolio share for different asset classes reported immediately after treatments by changing the outcome variable in equation (3) because frictions such as actual transaction costs or cognitive constraints often result in a muted passthrough of changes in beliefs to actual trading decisions (Schnorpfeil et al. 2025; Beutel and Weber 2026). The latter specification omits the control for previous ownership of the asset.

We present results from this regression in Table 7. First, consider the effects of Bitcoin treatments. These treatments lead households to immediately revise upward the desired share of their portfolio allocated to cryptocurrency by about 2 percentage points. Given that the average desired portfolio share of crypto across households in the control is 4.3 percent our estimates imply that both Bitcoin treatments increase the desired portfolio share of crypto by around 47 percent relative to the control group. This result is consistent with households raising their cryptocurrency return expectations when being informed about past Bitcoin returns. Moreover, as they increase their desired portfolio share of crypto, households also tend to raise their desired share of stocks. This result is again consistent with households raising their US stock return expectations after being informed about past Bitcoin returns. We also find evidence that the increase in the desired portfolio share of crypto and stocks is accompanied by a reduction in the desired portfolio share of accounts. These findings align with recent work by Hackethal et al. (2022), who found that upon purchasing cryptocurrency, investors tend to engage in other high-risk investments as well. When looking at whether households actually buy more crypto after the treatments, we find a statistically significant positive effect for both treatments of about 2.5 percentage points. Approximately 11 percent of the respondents hold cryptocurrency before the information provision, so these

treatments increase the unconditional likelihood of buying crypto by around 23 percent. Notice that identification stems from individuals who change their crypto ownership status across waves, which is infrequent, and the number of “switchers” in each treatment group is limited; therefore it is generally difficult to establish statistical significance along this margin for a given treatment group. Therefore, to increase statistical power, we also report results for pooling the Bitcoin treatments and report the p-value for the null of no response at the bottom of Table 7. When pooling the treatments, we can reject the null that the treatments jointly do not affect the crypto buying decision with a p-value of 0.017. This indicates that providing information about recent Bitcoin returns induces some households to start buying cryptocurrency.

When examining the effects of treatments involving information about stock prices on desired portfolio allocations, we cannot reject the null of no effect. However, for crypto purchases, we find that households buy more crypto after being shown the S&P 500 index over the previous 12 months. When we combine information from the stock treatments, we find a p-value of 0.014 for the null that the treatments jointly do not affect crypto purchases. For GameStop, we see that the treatment showing recent price dynamics increases the desired portfolio share of crypto and reduces the desired portfolio share of accounts, just as with the Bitcoin treatments, although we don’t find an effect on actual subsequent crypto purchases. Finally, we consider how information about inflation affects desired portfolio shares and crypto purchases. Overall, the effects are quite muted, and we observe no response to the information provided.

Taken together, this evidence indicates that the effects of treatments involving new information about Bitcoin are stronger than the effects of treatments with information about stocks, consistent with households being generally better informed about stocks than about cryptocurrency. Indeed, when we compare results for the subsample of households that reported not buying cryptocurrency because they were not sufficiently informed about it, we generally find stronger effects than when we look at the subsample of households that reported not buying cryptocurrency because they did not know about crypto (Appendix Table A5). On the contrary, survey respondents who reported that they didn’t hold any crypto because they thought it was a bad investment do not react to the provided information. This latter result also helps to rule out concerns that experimenter demand effects are driving our results.

Next, we causally relate expected returns to the holding of crypto assets. To do so, we rely on the fact that for each asset, we elicit return expectations before and after providing information

treatments. With this information, we aim to provide causal evidence on how expected returns for crypto, stocks, and GameStop affect the holding of crypto assets. Figure 6 shows the binscatter between crypto ownership and asset return expectations. The vertical axis corresponds to crypto ownership after partialing out controls. The horizontal axis corresponds to the predicted value from a regression of the posterior expected asset return (after partialing out controls) on information treatment dummies (after partialing out controls). For each asset, we use the two information treatments associated with it. Controls include sociodemographic characteristics and the prior expected asset return.¹⁶ Panel A of Figure 6 shows that an exogenous increase in crypto return expectations leads households to buy more crypto. We also find that an exogenous increase in GameStop expectations is associated with households increasing their crypto holdings (Panel C), although the economic magnitude is smaller than that for crypto expectations. Again, these results are consistent with the evidence in Table 6, which shows that households perceived a positive correlation between cryptocurrency and GameStop expected returns. Finally, we find no statistically significant effect of stock return expectations on crypto purchases (Panel B).

We view these results as illustrating one mechanism that can help explain the emergence of asset price bubbles. Given a new asset that is generally unknown, news about recent returns can have clear effects on average consumers' expectations and asset-holding decisions. Positive returns attract new participants, which raises the price further. The experience of high returns in the past does not seem to lead individuals to expect any mean reversion; extrapolation of past returns into future returns seems to be the rule (Greenwood and Shleifer 2014). As we can see from information treatments, news about these past returns then translates into agents' portfolio decisions. In contrast, these information effects appear to be weaker for more established financial assets like stocks, likely due to the greater prior information and experience individuals have with them.

VI Conclusion

Cryptocurrency has become an increasingly visible and important asset in financial markets. Who buys this asset and why? Our results shed new light on the types of individuals buying cryptocurrency, their reasons for doing so, and the ways in which their opinions and expectations

¹⁶ More specifically, the vertical axis corresponds to the residuals from the following regression: $\mathbb{I}_{i,t+1}^{crypto} = a + \gamma X_i + error$, where X_i is the vector of household control variables augmented with the prior return beliefs. For the horizontal axis, we compute the residuals from (1) $\mathbb{I}_{i,t}\{i \in Treatment\ j\} = a + \gamma X_i + error\ (resid_{z1})$, (2) $E_i^{pre} r = a + \gamma X_i + error\ (resid_{z2})$, and (3) $E_i^{post} r = a + \gamma X_i + error\ (resid_x)$. Then, the horizontal axis is the predicted value from the following regression: $resid_x = a + b * resid_{z1} + c * resid_{z2} + error$.

differ from those who choose not to invest in this asset class. We find that cryptocurrency looks different from most financial assets in a number of ways, in particular in terms of just how different beliefs about the asset are for those holding the asset versus those not holding the asset. The reasons seem to be twofold. First, many individuals are rather uninformed about cryptocurrency, to a much larger extent than what we observe for other financial assets. Second, conditional on learning about cryptocurrency, individuals seem to reach very different conclusions about crypto's viability as a financial asset. Some view it as having a high expected return and as a good diversification opportunity, whereas others view it as a low expected return investment and excessively risky. These different views can account for much more of the variation in who chooses to buy cryptocurrency than a wide range of observable characteristics, whereas the latter play a much larger role than differences in expected returns in explaining ownership decisions for other asset types. Finally, providing simple information about historical rates of return for cryptocurrency has clear effects on the crypto purchasing decisions of individuals, suggesting a mechanism through which price increases in a new asset class induce entry by other participants that further fuel price growth.

So is crypto just gold for nerds, as Stephen Colbert quipped? While there are certainly some similarities along some dimensions, cryptocurrency stands out in how poorly understood it is by most individuals. But even as information about it is acquired, potential investors reach very different conclusions about its viability as a financial asset. The absence of common information and beliefs about crypto across investors suggests that price volatility will continue to be one of the most defining characteristics of this new asset for the foreseeable future.

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Table 1: Who Owned Cryptocurrency in 2021Q3?

Dependent variable: Indicator for ownership of cryptocurrency			
<i>Gender</i>		<i>House ownership [omitted category: own house/apt without a mortgage]</i>	
Male	4.016*** (0.859)	Own house/apt	-1.031 (1.190)
		fixed-rate mortgage	2.905 (3.886)
<i>Income [omitted category: Bottom Tercile]</i>		Own house/apt	2.005 (1.275)
Medium Tercile	1.697* (1.016)	variable-rate mortgage	-1.368 (1.969)
Highest Tercile	2.855*** (0.946)	Rent house/apt	
		Other	
<i>Education [omitted category: High school or less]</i>		<i>Monthly spending debt and rent payments</i>	
Assoc. Degree or some college	-1.295 (0.944)	Log spending	0.415** (0.165)
College or more	0.424 (1.101)		
<i>Age [omitted category: 40 or less]</i>		<i>Stimulus check</i>	
[41, 60]	-8.002*** (1.578)	Log stimulus amount	0.186* (0.096)
61 or more	-13.147*** (1.606)		
<i>Race</i>		<i>Financial Wealth ></i>	
White	-3.525*** (1.118)	1-month HH's income	4.323*** (0.866)
<i>Employment status [omitted category: Paid job]</i>		<i>Political party [omitted category: Democrats]</i>	
Looking for a job	-3.390* (1.776)	Republicans	0.568 (0.906)
Inactive	-1.051 (1.203)	Green Party	2.758 (5.848)
Retiree	-1.214 (0.845)	Libertarian Party	7.473** (3.647)
		Other or independent	2.311* (1.249)
		Prefer not to answer	-0.738 (1.114)
Observations		9,843	
R ²		0.063	

Notes: The table reports coefficients from regressing an indicator variable for those households reporting that they owned any crypto in 2021Q3 on observable characteristics. Statistical significance at the 1%, 5% and 10% levels are indicated by ***, ** and *, respectively.

Table 2: Contribution of Observables and Beliefs in Explaining Asset Holding

	Dependent variable: own crypto					
	(1)	(2)	(3)	(4)	(5)	(6)
1-year-ahead expected crypto return		0.82*** (0.13)		0.80*** (0.13)	0.81*** (0.13)	0.76*** (0.12)
Perceived risk crypto			-3.21** (1.25)	-2.56** (1.14)	-3.56*** (1.17)	-4.11*** (1.15)
1-year-ahead expected stocks return					0.37 (0.27)	0.24 (0.26)
Perceived risk stocks					2.41* (1.37)	2.50** (1.27)
1-year-ahead expected bonds return					-1.23*** (0.37)	-1.15*** (0.38)
Perceived risk bonds					-1.24 (1.31)	-0.79 (1.16)
1-year-ahead expected gold return					-0.18 (0.15)	-0.08 (0.16)
Perceived risk gold					-1.04 (1.23)	-0.78 (1.16)
Expected Inflation					0.38 (0.35)	0.29 (0.36)
Control for Observables	Y	N	N	N	N	Y
Observations	913	913	913	913	913	913
R ²	0.086	0.106	0.013	0.114	0.145	0.210

Notes: The table reports results from regressing an indicator variable for owning cryptocurrency in 2021Q3 on the observables listed in Table 1 (columns 1 and 6) or measures of expected returns or perceived risks of different financial assets (columns 2-6). In column (1), we report the R² from regressing an indicator variable for crypto ownership on all the observables we use in Table 1 for the subset of individuals who provided quantitative expected returns for different financial assets. The sample is restricted to respondents who provided quantitative responses for returns for each asset class. The perceived risk for an asset is measured with a question eliciting perceptions of risk on a 1 (very safe) to 5 (very risky) scale. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Table 3: The Effect of Bitcoin Price Changes on Durable Goods Purchases

	Purchase of				ln(Non-durable spending)
	Any Durable	Home	Car	Big item	
	(1)	(2)	(3)	(4)	(5)
Panel A: Bitcoin Price Changes					
$Crypto_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Bitcoin}$	1.41*** (0.38)	0.16** (0.07)	0.41** (0.20)	0.93*** (0.25)	-0.34 (0.29)
Observations	39,398	39,398	39,398	39,398	47,379
Panel B: Bitcoin Price Changes after one Quarter					
$Crypto_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Bitcoin}$	0.15 (0.47)	0.05 (0.08)	0.25 (0.26)	0.02 (0.36)	0.18 (0.49)
Observations	21,716	21,716	27,716	27,716	30,890
Panel C: Gold Price Changes					
$Gold_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Gold}$	2.08*** (0.57)	0.11 (0.11)	0.33 (0.33)	2.05*** (0.43)	-0.55 (0.75)
Observations	39,198	39,198	39,198	39,198	47,243
Panel D: Stock Price Changes					
$Stock_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Stocks}$	0.56*** (0.11)	-0.04*** (0.01)	0.30*** (0.06)	0.39*** (0.09)	0.38** (0.16)
Observations	38,198	38,198	38,198	38,198	47,093
Panel E: Bond Price Changes					
$Bond_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Bonds}$	1.64** (0.70)	1.19*** (0.14)	0.19 (0.43)	1.49*** (0.58)	2.19*** (0.73)
Observations	38,734	38,734	38,734	38,734	47,090
Panel F: Pooled					
Bitcoin Price Changes	0.92*** (0.28)	0.01 (0.03)	0.19 (0.16)	0.76*** (0.20)	-0.46 (0.32)
Gold Price Changes	2.10*** (0.47)	-0.10* (0.06)	0.41 (0.27)	2.02*** (0.37)	-1.17 (1.02)
Stock Price Changes	0.76*** (0.10)	-0.04*** (0.01)	0.32*** (0.06)	0.57*** (0.09)	0.18 (0.17)
Bond Price Changes	0.50 (0.64)	-0.04 (0.09)	-0.25 (0.39)	1.05** (0.53)	2.04* (1.14)
Observations	37,063	37,063	37,063	37,063	46,291

Notes: The table reports regressions of an indicator variable for whether a household purchased any durable good (column 1), a house (column 2), a car (column 3), or a big-ticket item (column 4) on their lagged portfolio share in an asset interacted with the log change in price of that asset since the last quarter for different assets. For column 5, the dependent variable is the household's level of spending on non-durables and services. Robust standard errors clustered by households are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively. The sample period is 2018Q3-2020Q4.

Table 4: Share of “I Don’t Know” Responses to Expected Return Question

	Overall	By ownership of asset	
		Own	Don’t own
Savings Account	60%	n.a.	n.a.
Stocks	68%	47%	77%
Housing	72%	68%	80%
Bonds	74%	62%	78%
Gold	78%	55%	80%
Cryptocurrency	84%	54%	87%

Notes: The table reports the fraction of households that responded “I don’t know” when asked to provide an expected return for each type of financial asset in 2021Q3.

Table 5: Relative Explanatory Power of Observables and Expectations for Asset Ownership

Asset	R ² of asset holding coming from	
	Observables	Expected Returns and Risk
Crypto	0.09	0.15
Gold	0.11	0.02
Bonds	0.20	0.03
Stocks	0.34	0.07

Notes: The table reports R² from regressing an indicator variable for ownership in 2021Q3 of each type of asset on either individual observables (from Table 1) in the first column or on expected returns and perceived risk for all asset classes (as in Table 2) in the second column.

Table 6: Average Household Responses to Treatments

	Immediate revision		
	Cryptocurrency (1)	US stocks (2)	GameStop (3)
Bitcoin treatments			
Return, past 12 months (14.3%)	3.264*** (0.399)	0.611* (0.353)	1.647*** (0.348)
Figure price, past 12 months	1.154*** (0.402)	0.989*** (0.354)	0.683** (0.343)
S&P 500 treatments			
Return, past 12 months (9.7%)	-0.904** (0.385)	-0.965*** (0.345)	0.098 (0.341)
Figure index, past 12 months	-0.481 (0.389)	-0.173 (0.352)	-0.126 (0.345)
GameStop treatments			
Return, past 12 months (60.1%)	2.470*** (0.401)	1.598*** (0.357)	4.337*** (0.383)
Figure price, past 12 months	1.153*** (0.395)	0.104 (0.352)	1.461*** (0.349)
Inflation treatment			
FOMC inflation forecast (2.5%)	-0.328 (0.384)	-0.217 (0.347)	-0.009 (0.342)
Observations	11,684	11,874	11,502
R ²	0.031	0.027	0.035

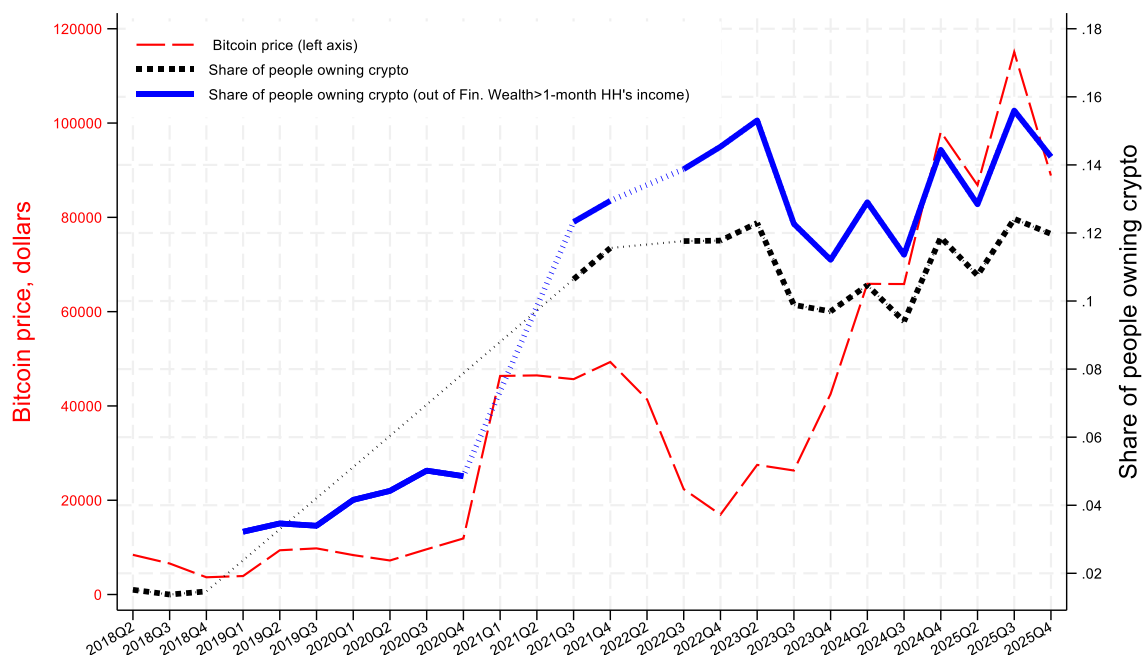
Notes: The table reports the immediate change in asset return expectations after the treatment of individuals in each treatment group relative to those in the control group. Column (1) shows results for cryptocurrency return expectations, column (2) shows results for US stock return expectations, and column (3) shows results for GameStop return expectations. Differences in beliefs are measured relative to initial beliefs measured before all treatments. Treatments are described in detail in the text. We control for respondent-specific controls. Results are from Huber robust regressions to control for outliers and influential observations. Robust standard errors are reported in parentheses.

Table 7: The Effects of Information Treatments on Desired and Actual Portfolios

	Own	Desired portfolio share				
	crypto	crypto	gold	stocks	bonds	accounts
	(1)	(2)	(3)	(4)	(5)	(6)
Bitcoin treatments						
Return, past 12 months (14.3%)	2.41** (1.02)	2.07*** (0.40)	-0.13 (0.58)	1.64* (0.94)	0.45 (0.59)	-4.03*** (1.26)
Figure price, past 12 months	2.48** (1.12)	1.75*** (0.42)	-0.62 (0.58)	2.20** (0.96)	0.11 (0.59)	-3.44*** (1.25)
S&P 500 treatments						
Return, past 12 months (9.7%)	-0.44 (0.89)	-0.09 (0.37)	0.02 (0.59)	-0.29 (0.94)	-0.75 (0.56)	1.10 (1.27)
Figure index, past 12 months	2.29** (0.96)	0.06 (0.37)	0.06 (0.62)	-0.11 (0.95)	-0.60 (0.57)	0.59 (1.29)
GameStop treatments						
Return, past 12 months (60.11%)	1.07 (0.87)	0.16 (0.37)	0.13 (0.59)	-0.83 (0.93)	-0.37 (0.58)	0.92 (1.27)
Figure price, past 12 months	-0.14 (0.99)	2.01*** (0.43)	0.56 (0.60)	0.66 (0.95)	0.08 (0.59)	-3.30*** (1.26)
Inflation treatment						
FOMC inflation forecast (2.5%)	0.74 (0.83)	-0.08 (0.36)	-0.33 (0.59)	-0.22 (0.94)	-0.29 (0.57)	0.92 (1.27)
Observations	5,352	10,379	10,379	10,379	10,379	10,379
R-squared	0.510	0.09	0.03	0.12	0.04	0.05
p-value (inflation treatment)	0.369	0.832	0.572	0.816	0.612	0.468
p-value (Bitcoin treatments)	0.017	0.000	0.528	0.057	0.736	0.003
p-value (stock treatments)	0.014	0.930	0.994	0.954	0.373	0.686
p-value (GameStop treatments)	0.368	0.000	0.634	0.275	0.716	0.002

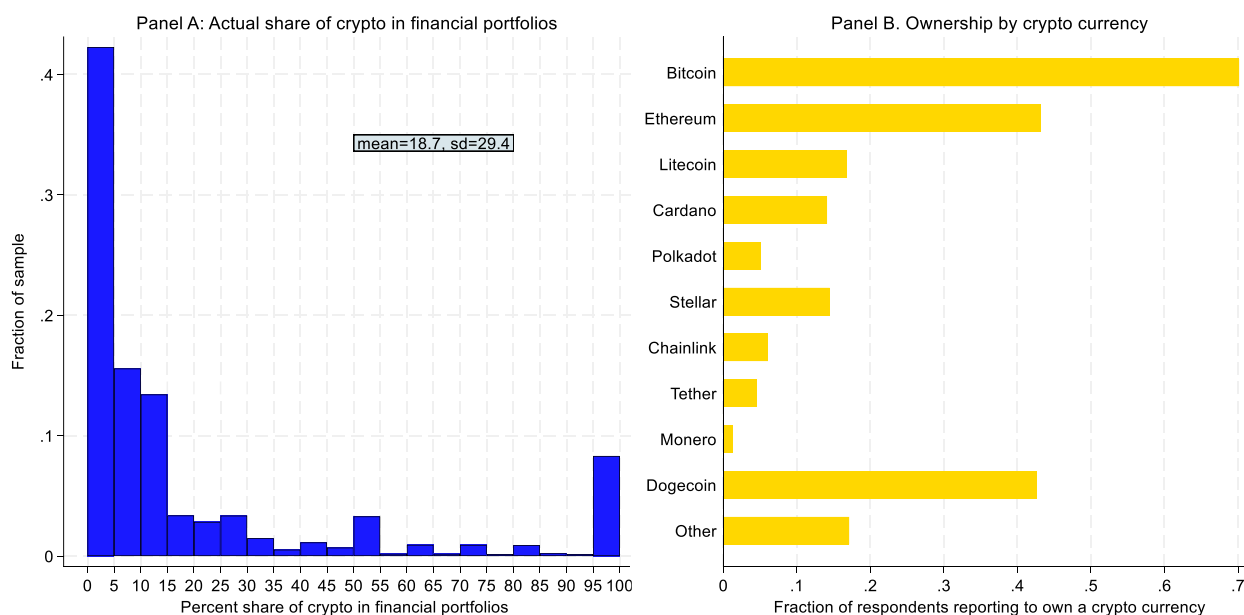
Notes: Sociodemographic controls are included but not reported. In column (1), the dependent variable is an indicator variable equal to one if a respondent owns cryptocurrency in a follow-up wave and zero otherwise. In this column, we also control for owning cryptocurrency (indicator variable) in pre-treatment. In columns (2)-(6), the dependent variables are the percent share that respondents assign to their ideal portfolio allocation of financial assets. These responses are recorded after the treatment in the same wave. Robust standard errors are reported in parentheses. ***, **, * denote statistical significance at the 1, 5 and 10 percent levels. The sample period is 2025Q2-2025Q4.

Figure 1: Ownership of Cryptocurrencies by US Households



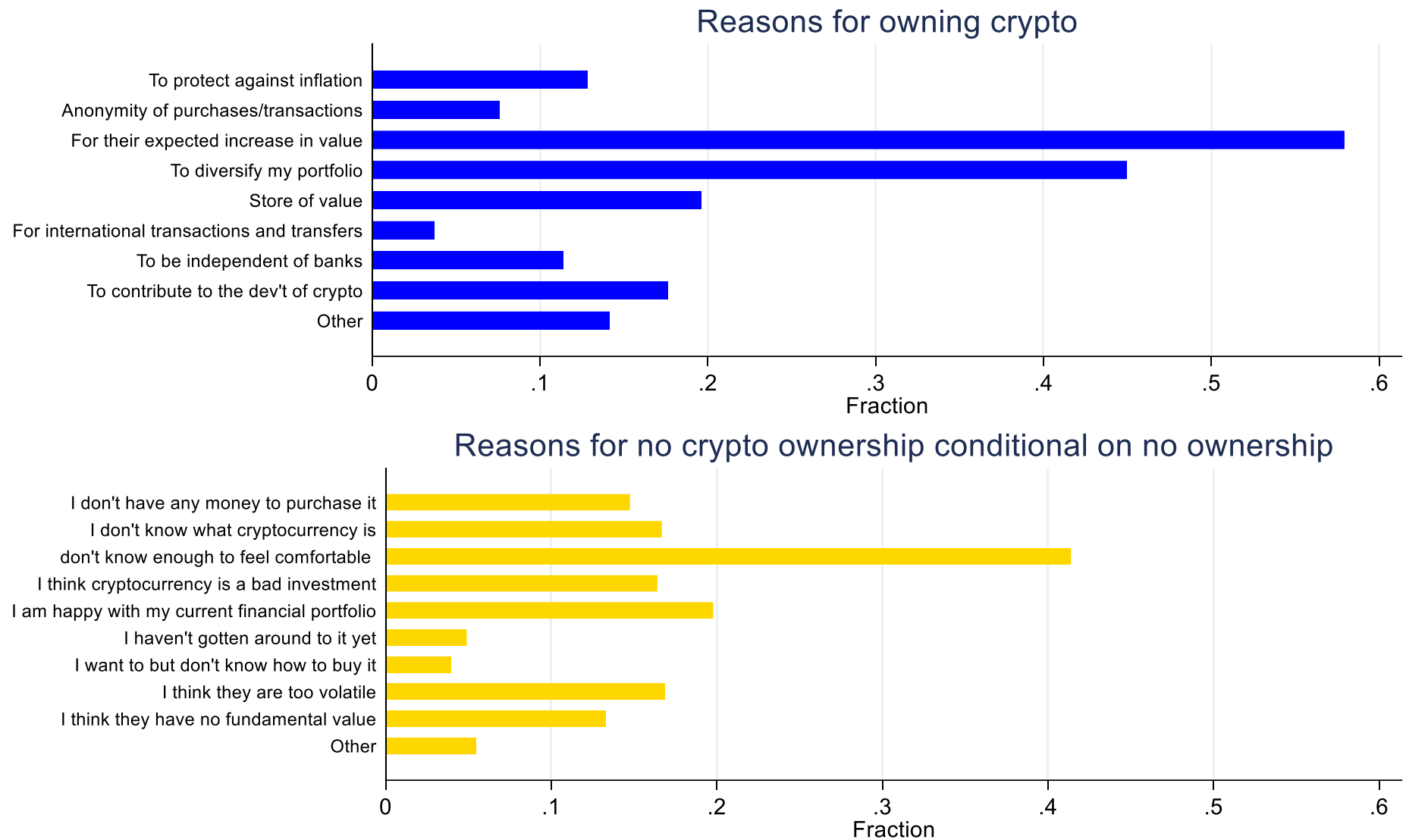
Notes: The figure reports time series for Bitcoin prices and the share of households reporting that they own cryptocurrency. The format of the ownership question evolved across survey waves. In the early (2018) and late (2021-2022) waves of the survey, all households were asked to report if they own cryptocurrency. In the middle waves (2019-2020), households were asked about cryptocurrency ownership only if they reported that they have financial wealth greater than their monthly income.

Figure 2: Crypto in Financial Portfolios of Crypto Owners



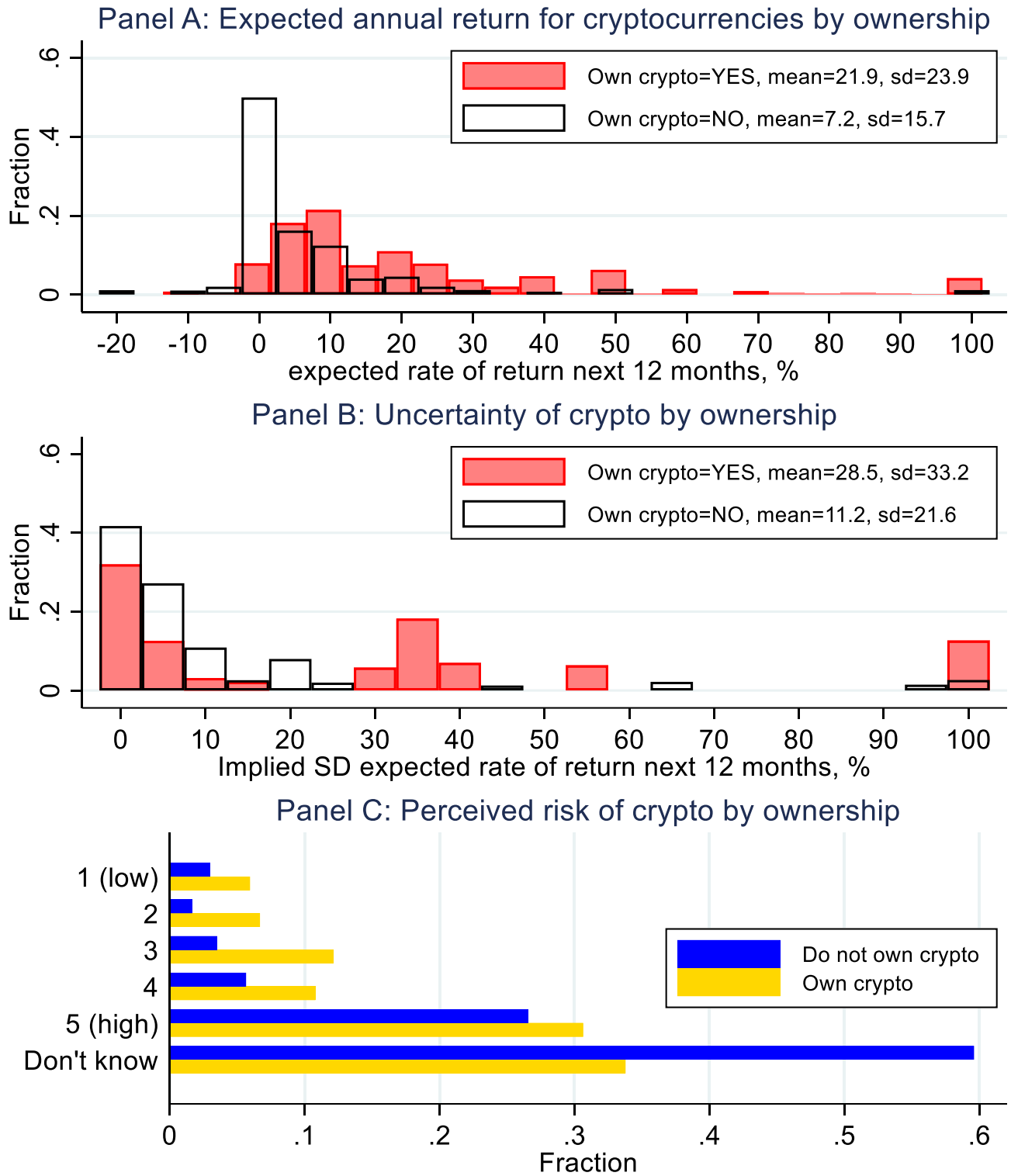
Notes: Panel A reports the share of financial portfolios allocated to cryptocurrencies conditional on owning a cryptocurrency. Panel B reports which cryptocurrencies are in financial portfolios conditional on owning a cryptocurrency. For Panel B, respondents can choose multiple currencies. The data are from the summer 2021 survey wave.

Figure 3: Reasons Why Individuals do and Do Not Own Cryptocurrency



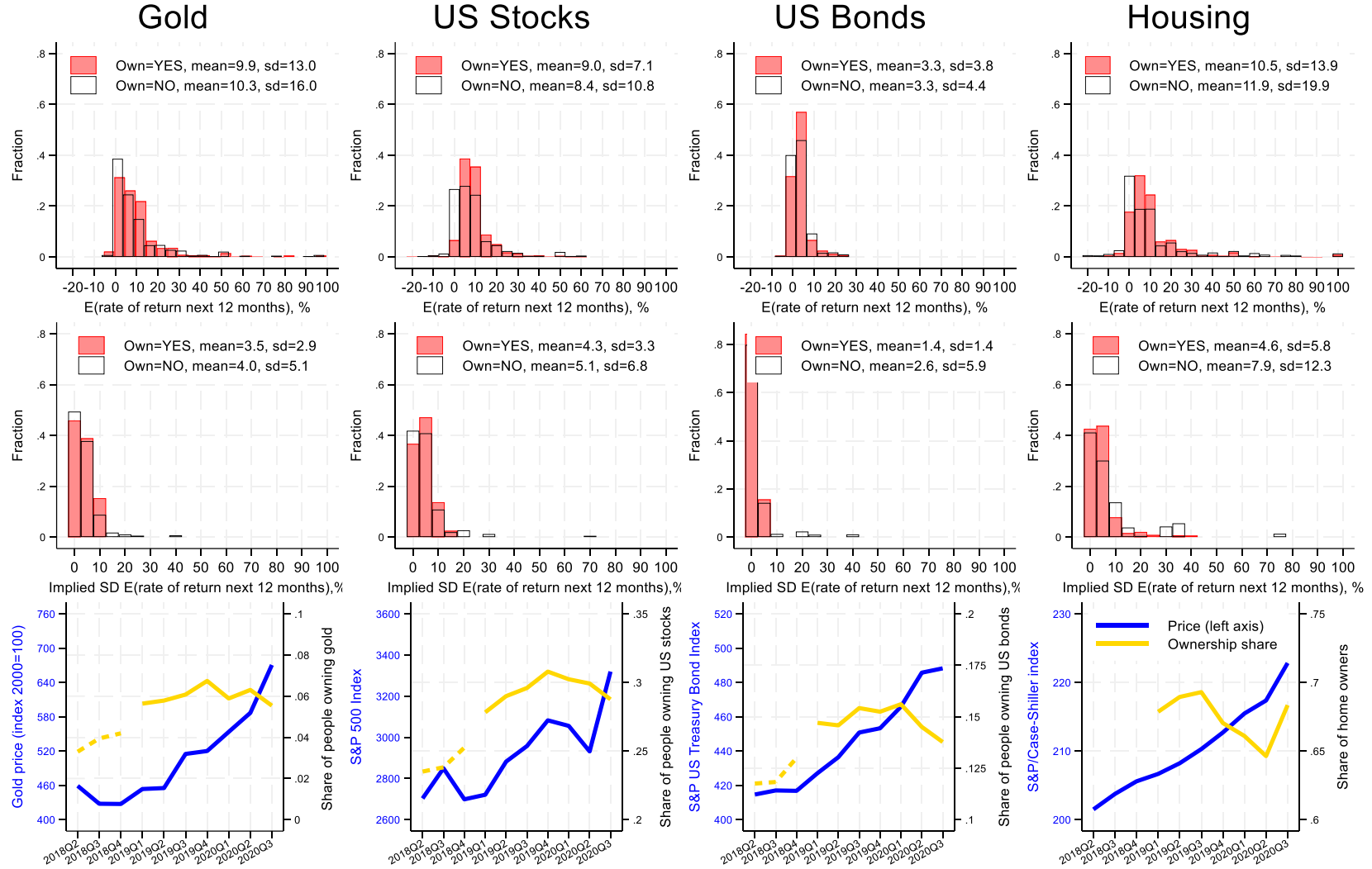
Notes: The top panel shows the distribution of responses to “Why do you hold cryptocurrency? Please select all that apply.” The bottom panel shows the distribution of responses to “Please select the reason(s) that best describe why you don’t own any cryptocurrency.” The data are from the summer 2021 survey wave.

Figure 4: Expected Crypto Returns, Uncertainty about Returns, and Perceived Risk of Crypto



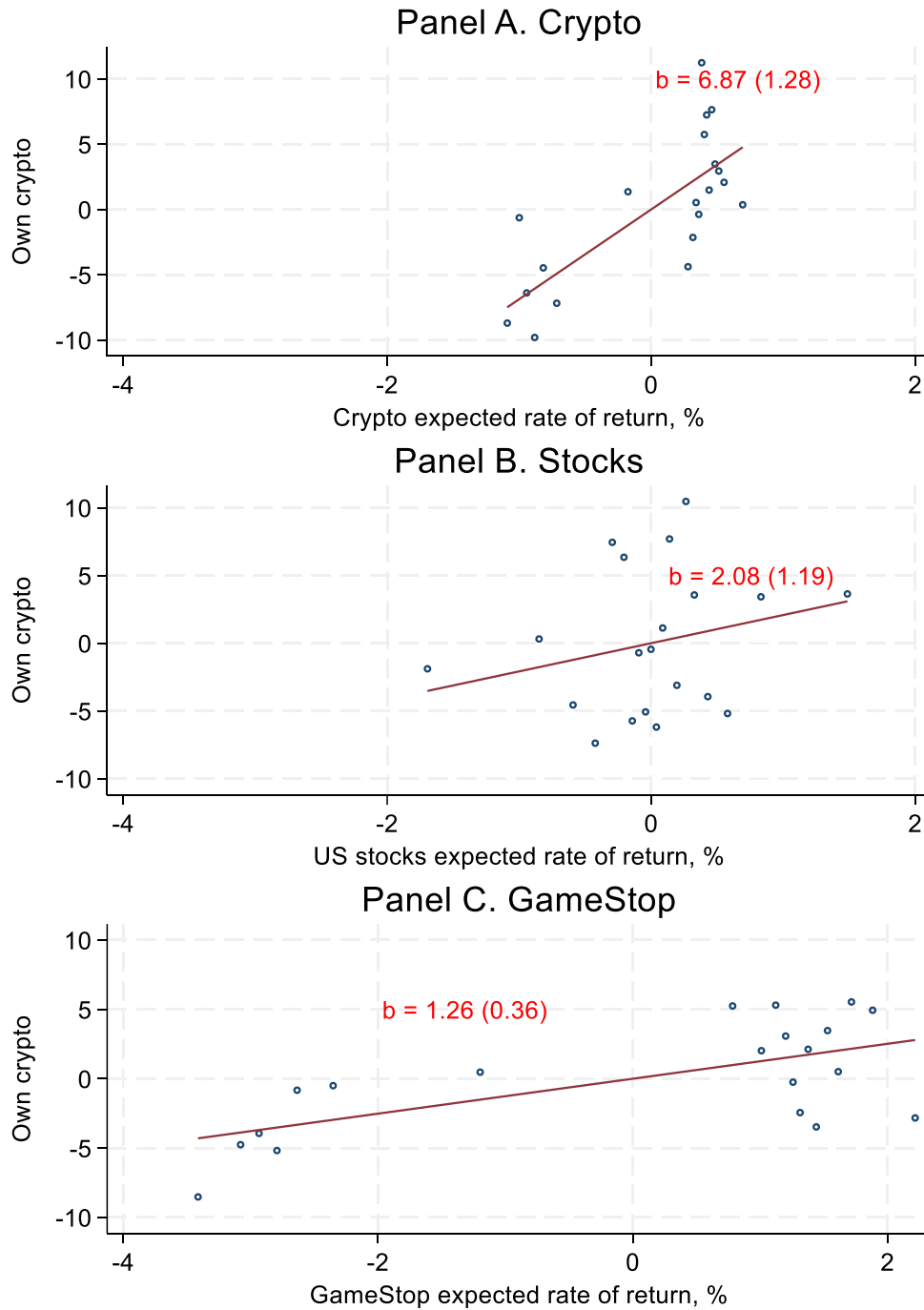
Notes: Panel A reports the histogram of expected returns for Bitcoin by crypto ownership. Panel B reports the histogram for implied standard deviation (uncertainty) in the reported subjective distributions by ownership status. Panel B data are restricted to the control group because subjective distributions were elicited only post-treatment. We assume a symmetric triangular distribution when we compute the implied mean and uncertainty for asset class k and respondent i as follows: $E(\text{return}_i^k) = \frac{1}{4}\{\text{Lowest rate}\}_i^k + \frac{1}{2}\{\text{Most likely rate}\}_i^k + \frac{1}{4}\{\text{Highest rate}\}_i^k$ and $E \text{var}(\text{return}_i^k) = \frac{1}{4}(\{\text{Lowest rate}\}_i^k)^2 + \frac{1}{2}(\{\text{Most likely rate}\}_i^k)^2 + \frac{1}{4}(\{\text{Highest rate}\}_i^k)^2 - (E(\text{return}_i^k))^2$ and $E \text{std}(\text{return}_i^k) = \sqrt{E \text{var}(\text{return}_i^k)}$. Panel C reports the distribution of the qualitative responses on Bitcoin's perceived riskiness. The data are from the 2021Q3 survey wave.

Figure 5: Expected Returns, Return Uncertainty, and Ownership of Other Assets



Notes: The top row reports the histogram of expected returns for each type of asset by ownership status in 2021Q3. The middle row reports the histogram for the implied standard deviation (uncertainty) in the reported subjective distributions by ownership status in 2021Q3. The data for this row are restricted to the control group because subjective distributions were elicited only post-treatment. Because of space constraints in the survey, we were not able to elicit subjective probabilities for each scenario. As a result, we assume a symmetric triangular distribution when we compute the implied mean and uncertainty for asset class k and respondent i as follows: $E(\text{return}_i^k) = \frac{1}{4}\{\text{Lowest rate}\}_i^k + \frac{1}{2}\{\text{Most likely rate}\}_i^k + \frac{1}{4}\{\text{Highest rate}\}_i^k$ and $E \text{var}(\text{return}_i^k) = \frac{1}{4}(\{\text{Lowest rate}\}_i^k)^2 + \frac{1}{2}(\{\text{Most likely rate}\}_i^k)^2 + \frac{1}{4}(\{\text{Highest rate}\}_i^k)^2 - (E(\text{return}_i^k))^2$ and $E \text{std}(\text{return}_i^k) = \sqrt{E \text{var}(\text{return}_i^k)}$. The bottom row reports the time series asset prices and the share of households reporting that they own the asset. The sample period is 2018Q2-2020Q4.

Figure 6. Crypto Ownership vs. Asset Return Expectations



Notes: The figure shows the binscatter between crypto ownership and asset return expectations. We use partial out controls. The vertical axis corresponds to crypto ownership after partialing out controls. The horizontal axis corresponds to the predicted value from a regression of the posterior expected asset return (after partialing out controls) on information treatment dummies (after partialing out controls). For each asset, we use information treatments relative to that asset. For example, for crypto return expectations, we use crypto return over the past 12 months and the figure showing the Bitcoin price over the last 12 months. Controls include sociodemographic characteristics and the prior expected asset return. Panel A shows the binscatter for crypto return expectations, Panel B shows the binscatter for stock return expectations, and Panel C shows the binscatter for GameStop return expectations.

Appendix

Appendix Table A1: Who Owns Gold?

Dependent variable: Indicator for ownership of gold			
<i>Gender</i>		<i>House ownership [omitted category: own house/apt without a mortgage]</i>	
Male	3.964*** (0.307)	Own house/apt	-0.154 (0.343)
		fixed-rate mortgage	1.262* (0.767)
<i>Income [omitted category: Bottom Tercile]</i>		Own house/apt	-0.263 (0.376)
Medium Tercile	-0.107 (0.257)	variable-rate mortgage	-0.283 (0.629)
Highest Tercile	1.590*** (0.287)	Rent house/apt	
		Other	
<i>Education [omitted category: High school or less]</i>		<i>Monthly spending debt and rent payments</i>	
Assoc. Degree or	-0.345 (0.293)	Log spending	-0.522*** (0.123)
some college	0.264 (0.333)		
College or more			
<i>Age [omitted category: 40 or less]</i>			
[41, 60]	-0.152 (0.285)		
61 or more	0.154 (0.418)	<i>Financial Wealth ></i>	
		1-month HH's income	10.416*** (0.231)
<i>Race</i>			
White	-2.227*** (0.308)	<i>Political party [omitted category: Democrats]</i>	
		Republicans	3.183*** (0.305)
<i>Employment status [omitted category: Paid job]</i>		Green party	3.556 (2.312)
Looking for a job	1.851*** (0.582)	Libertarian party	7.449*** (1.006)
Inactive	0.628** (0.282)	Other or independent	2.135*** (0.368)
Retiree	0.353 (0.423)	Prefer not to answer	0.628** (0.299)
Observations			77,029
R ²			0.069

Notes: See notes to Table 1. The data are pooled across 10 survey waves.

Appendix Table A2: Who Owns Stocks?

Dependent variable: Indicator for ownership of stocks			
<i>Gender</i>		<i>House ownership [omitted category: own house/apt without a mortgage]</i>	
Male	5.970*** (0.420)	Own house/apt	0.029 (0.501)
		fixed-rate mortgage	-2.139* (1.099)
		Own house/apt	-2.351*** (0.527)
		variable-rate mortgage	-2.538*** (0.940)
<i>Income [omitted category: Bottom Tercile]</i>			
Medium Tercile	0.044 (0.410)	Rent house/apt	
Highest Tercile	7.524*** (0.430)	Other	
<i>Education [omitted category: High school or less]</i>		<i>Monthly spending debt and rent payments</i>	
Assoc. Degree or	2.563*** (0.459)	Log spending	-0.064 (0.149)
some college			
College or more	10.668*** (0.502)		
<i>Age [omitted category: 40 or less]</i>			
[41, 60]	1.518*** (0.417)		
61 or more	0.619 (0.584)	<i>Financial Wealth ></i>	
		1-month HH's income	50.798*** (0.362)
<i>Race</i>		<i>Political party [omitted category: Democrats]</i>	
White	1.073** (0.430)	Republicans	-0.317 (0.453)
		Green party	0.042 (2.548)
<i>Employment status [omitted category: Paid job]</i>		Libertarian party	5.293*** (1.134)
Looking for a job	-1.767** (0.772)	Other or independent	-0.058 (0.518)
Inactive	-1.173*** (0.438)	Prefer not to answer	-1.312** (0.511)
Retiree	-1.491** (0.597)		
Observations			77,029
R ²			0.412

Notes: See notes to Table 1. The data are pooled across 10 survey waves.

Appendix Table A3: Who Owns Bonds?

Dependent variable: Indicator for ownership of bonds			
<i>Gender</i>		<i>House ownership [omitted category: own house/apt without a mortgage]</i>	
Male	2.455*** (0.408)	Own house/apt	-0.625 (0.474)
		fixed-rate mortgage	-1.036 (0.986)
		Own house/apt	-3.037*** (0.477)
<i>Income [omitted category: Bottom Tercile]</i>		variable-rate mortgage	
Medium Tercile	-0.511 (0.335)	Rent house/apt	-2.324*** (0.820)
Highest Tercile	4.686*** (0.361)	Other	
<i>Education [omitted category: High school or less]</i>		<i>Monthly spending debt and rent payments</i>	
Assoc. Degree or	0.632* (0.376)	Log spending	-0.542*** (0.143)
some college			
College or more	6.758*** (0.428)		
<i>Age [omitted category: 40 or less]</i>			
[41, 60]	1.318*** (0.389)		-
61 or more	2.780*** (0.559)	<i>Financial Wealth ></i>	
		1-month HH's income	24.585*** (0.303)
<i>Race</i>		<i>Political party [omitted category: Democrats]</i>	
White	0.932** (0.412)	Republicans	-2.198*** (0.431)
		Green party	5.150* (2.673)
<i>Employment status [omitted category: Paid job]</i>		Libertarian party	3.388*** (1.167)
Looking for a job	-0.985 (0.684)	Other or independent	-1.593*** (0.490)
Inactive	-1.305*** (0.375)	Prefer not to answer	-1.838*** (0.474)
Retiree	-0.708 (0.565)		
Observations			77,029
R ²			0.179

Notes: See notes to Table 1. The data are pooled across 10 survey waves.

Appendix Table A4: The Effect of Bitcoin Price Changes on Durable Goods Purchases

	Purchase of				ln(Non-durable spending)
	Any Durable	Home	Car	Big item	
	(1)	(2)	(3)	(4)	(5)
Panel A: $Crypto_Sh_{i,t-1} \geq 5$					
$Crypto_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Bitcoin}$	1.68*** (0.38)	0.13** (0.06)	0.46** (0.19)	1.15*** (0.25)	-0.27 (0.28)
Observations	39,128	39,128	39,128	39,128	47,065
Panel B: $Crypto_Sh_{i,t-1} < 5$					
$Crypto_Sh_{i,t-1} \times \Delta \log P_{i,t}^{Bitcoin}$	9.78** (4.52)	1.91* (1.14)	0.15 (2.24)	9.23*** (2.59)	-3.70 (2.90)
Observations	38,953	38,953	38,953	38,953	46,914

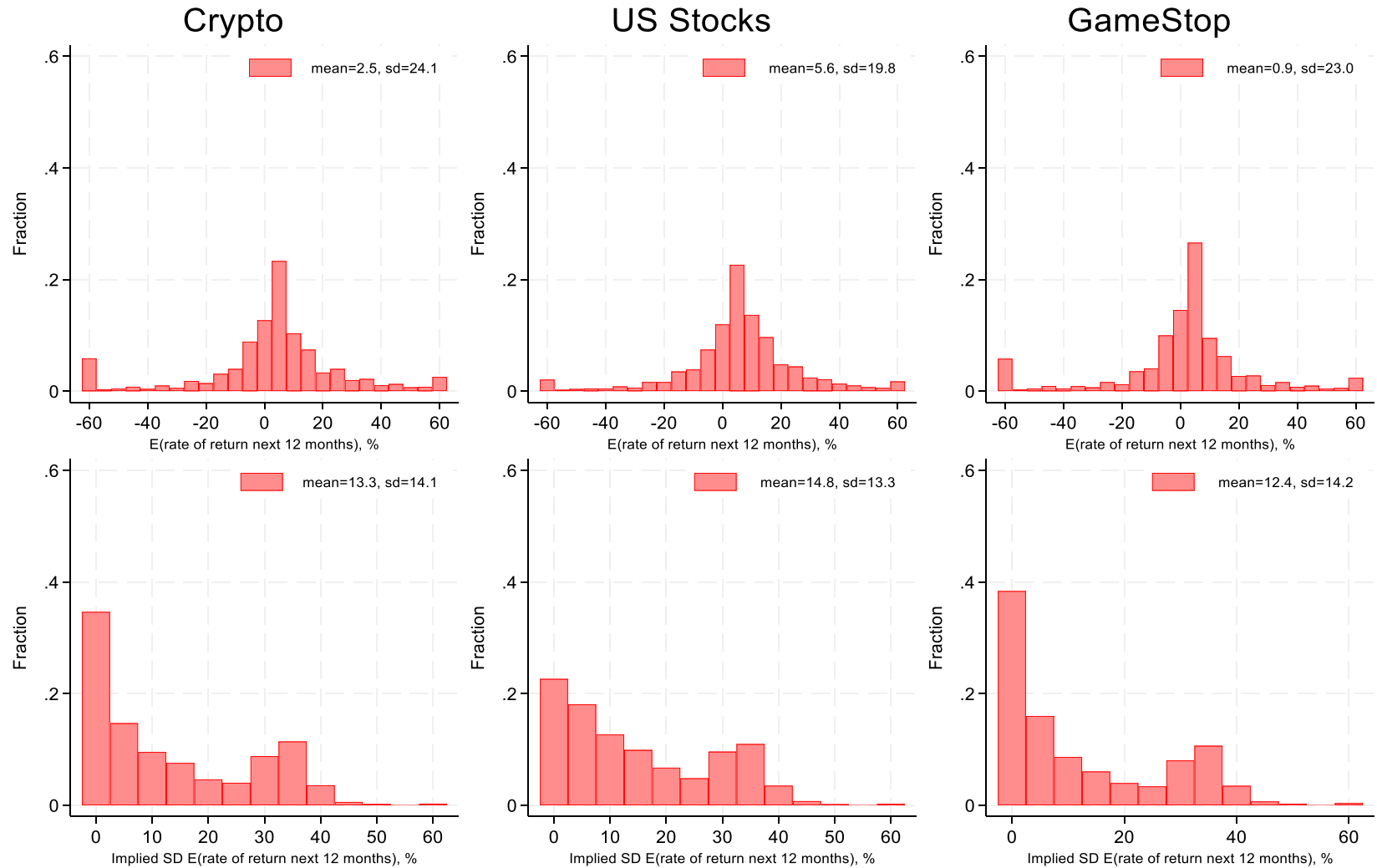
Notes: The table reports regressions of an indicator variable for whether a household purchased any durable good (column 1), a house (column 2), a car (column 3), or a big-ticket item (column 4) on their lagged portfolio share cryptocurrency interacted with the log change in price of Bitcoin the last quarter for different assets. For column 5, the dependent variable is the household's level of spending on non-durables and services. Panel A shows results for investors with more than median portfolio allocations into crypto, while Panel B shows results for investors with less than median portfolio allocations into crypto. Robust standard errors clustered by households are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively. The sample period is 2018Q3-2020Q4.

Appendix Table A5. Effects of Information Treatments by Reason for Not Owning Crypto

	Ideal share for those who do not know enough about crypto					Ideal share for those who think crypto is a bad investment				
	crypto	gold	stocks	bonds	accounts	crypto	gold	stocks	bonds	accounts
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Bitcoin treatments										
Return, past 12 months (14.3%)	5.84*** (1.30)	4.27* (2.23)	4.08* (2.45)	-0.54 (1.45)	-13.65*** (3.45)	0.91** (0.41)	0.95 (0.84)	0.67 (1.53)	0.73 (1.02)	-3.26* (1.94)
Figure price, past 12 months	4.09*** (1.24)	0.15 (1.33)	1.22 (2.43)	-0.44 (1.27)	-5.02 (3.30)	0.31 (0.40)	0.22 (0.85)	1.09 (1.54)	-0.16 (0.98)	-1.46 (1.91)
S&P 500 treatments										
Return, past 12 months (9.7%)	-0.06 (0.40)	-0.10 (0.71)	-0.20 (1.10)	-0.82 (0.64)	1.18 (1.49)	-0.09 (0.40)	1.59* (0.93)	1.33 (1.65)	-1.21 (1.01)	-1.62 (2.07)
Figure index, past 12 months	0.01 (0.41)	-0.37 (0.72)	-0.85 (1.11)	-0.93 (0.65)	2.13 (1.52)	-0.02 (0.38)	1.82* (1.01)	1.66 (1.68)	-0.53 (1.04)	-2.93 (2.11)
GameStop treatments										
Return, past 12 months (60.11%)	0.08 (0.40)	-0.13 (0.71)	-1.59 (1.09)	-0.73 (0.67)	2.37 (1.52)	0.05 (0.46)	0.44 (0.92)	0.88 (1.67)	-1.51 (1.02)	0.22 (2.09)
Figure price, past 12 months	3.42*** (1.27)	5.57** (2.26)	-4.32* (2.60)	1.52 (1.95)	-6.19 (3.80)	0.10 (0.37)	0.92 (0.89)	-0.04 (1.53)	0.13 (1.02)	-1.11 (1.95)
Inflation treatment										
FOMC inflation forecast (2.5%)	-0.18 (0.38)	-0.76 (0.68)	0.14 (1.10)	-0.17 (0.66)	0.97 (1.49)	-0.34 (0.38)	1.29 (0.98)	-1.24 (1.59)	-0.67 (1.06)	0.95 (2.07)
Observations	4,832	4,832	4,832	4,832	4,832	4,245	4,245	4,245	4,245	4,245
R ²	0.10	0.05	0.12	0.04	0.05	0.05	0.04	0.13	0.06	0.10
p-value (inflation treatment)	0.633	0.266	0.901	0.797	0.515	0.371	0.190	0.437	0.529	0.645
p-value (Bitcoin treatments)	0.000	0.159	0.238	0.891	0.000	0.078	0.483	0.777	0.608	0.234
p-value (S&P 500 treatments)	0.984	0.873	0.727	0.293	0.371	0.971	0.110	0.572	0.482	0.380
p-value (GameStop treatments)	0.027	0.041	0.134	0.345	0.043	0.966	0.581	0.845	0.178	0.757

Notes: See notes to Table 6.

Appendix Figure A1: Expected Returns and Return Uncertainty of Crypto, US Stocks, and GameStop



Notes: The top row reports the histogram of the implied expected returns coming from the distributional question for each type of asset in 2025Q2. The bottom row reports the histogram for implied standard deviation (uncertainty).

Online Appendix

Appendix Table B1: Power of Observables and Expectations for Share of Crypto in Portfolio

Dependent variable: crypto share	(1)	(2)	(3)	(4)	(5)	(6)
1-year-ahead expected crypto return		0.226*** (0.068)		0.222*** (0.068)	0.247*** (0.072)	0.245*** (0.071)
Perceived risk crypto			-0.742 (0.497)	-0.585 (0.472)	-0.384 (0.559)	-0.590 (0.503)
1-year-ahead expected stocks return					-0.036 (0.051)	-0.051 (0.051)
Perceived risk stocks					-0.225 (0.643)	-0.066 (0.424)
1-year-ahead expected bonds return					-0.158 (0.147)	-0.145 (0.140)
Perceived risk bonds					1.052 (0.835)	0.923 (0.667)
1-year-ahead expected gold return					-0.050 (0.044)	-0.044 (0.045)
Perceived risk gold					-0.262 (0.466)	-0.133 (0.410)
<i>Expected Inflation</i>					-0.034 (0.135)	-0.059 (0.171)
Control for Observables	Y	N	N	N	N	Y
Observations	898	898	898	898	898	898
R-squared	0.077	0.081	0.007	0.086	0.106	0.178

Notes: The table reports results from regressing the share of crypto in portfolio reported in wave 2021Q3 on the observables listed in Table 1 (columns 1 and 6) or measures of expected returns or perceived risks of different financial assets (columns 2-6). The sample is restricted to respondents who provided quantitative responses for returns for each asset class. The perceived risk for an asset is measured with a question eliciting perceptions of risk on a 1 (very safe) to 5 (very risky) scale. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Appendix Table B2: Power of Observables and Expectations for Desired Share of Crypto in Portfolio

Dependent variable: desired crypto share	(1)	(2)	(3)	(4)	(5)	(6)
1-year-ahead expected crypto return				0.200*** (0.050)	0.200*** (0.050)	0.191*** (0.048)
Perceived risk crypto		-1.143*** (0.409)		-0.984*** (0.357)	-1.001*** (0.375)	-1.079*** (0.361)
1-year-ahead expected stocks return					0.009 (0.041)	0.006 (0.042)
Perceived risk stocks					0.350 (0.371)	0.397 (0.317)
1-year-ahead expected bonds return					-0.167 (0.115)	-0.175* (0.106)
Perceived risk bonds					0.224 (0.404)	0.198 (0.363)
1-year-ahead expected gold return					0.041 (0.061)	0.046 (0.062)
Perceived risk gold					-0.283 (0.268)	-0.234 (0.242)
<i>Expected Inflation</i>					0.029 (0.092)	0.029 (0.112)
Control for Observables	Y	N	N	N	N	Y
Observations	901	901	901	901	901	901
R-squared	0.056	0.128	0.032	0.152	0.165	0.207

Notes: The table reports results from regressing the desired fraction of financial portfolio/savings allocated to cryptocurrencies in two years reported in wave 2021Q3 on the observables listed in Table 1 (columns 1 and 6) or measures of expected returns or perceived risks of different financial assets (columns 2-6). The sample is restricted to respondents who provided quantitative responses for returns for each asset class. The perceived risk for an asset is measured with a question eliciting perceptions of risk on a 1 (very safe) to 5 (very risky) scale. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

Appendix Table B3: Relative Explanatory Power of Observables and Expectations for Share of Asset in Portfolio

Asset	R ² of asset holding coming from	
	Observables	Expected Returns and Risk
Crypto	0.08	0.11
Gold	0.08	0.06
Bonds	0.18	0.04
Stocks	0.22	0.14

Notes: The table reports R² from regressing the share of each type of asset in an individual's financial portfolio on either individual observables (from Table 1) in the first column or on expected returns and perceived risk for all asset classes (as in Table 4) in the second column. The sample period is 2021Q3.

Appendix Table B4: Relative Explanatory Power of Observables and Expectations for Desired Share of Asset in Portfolio

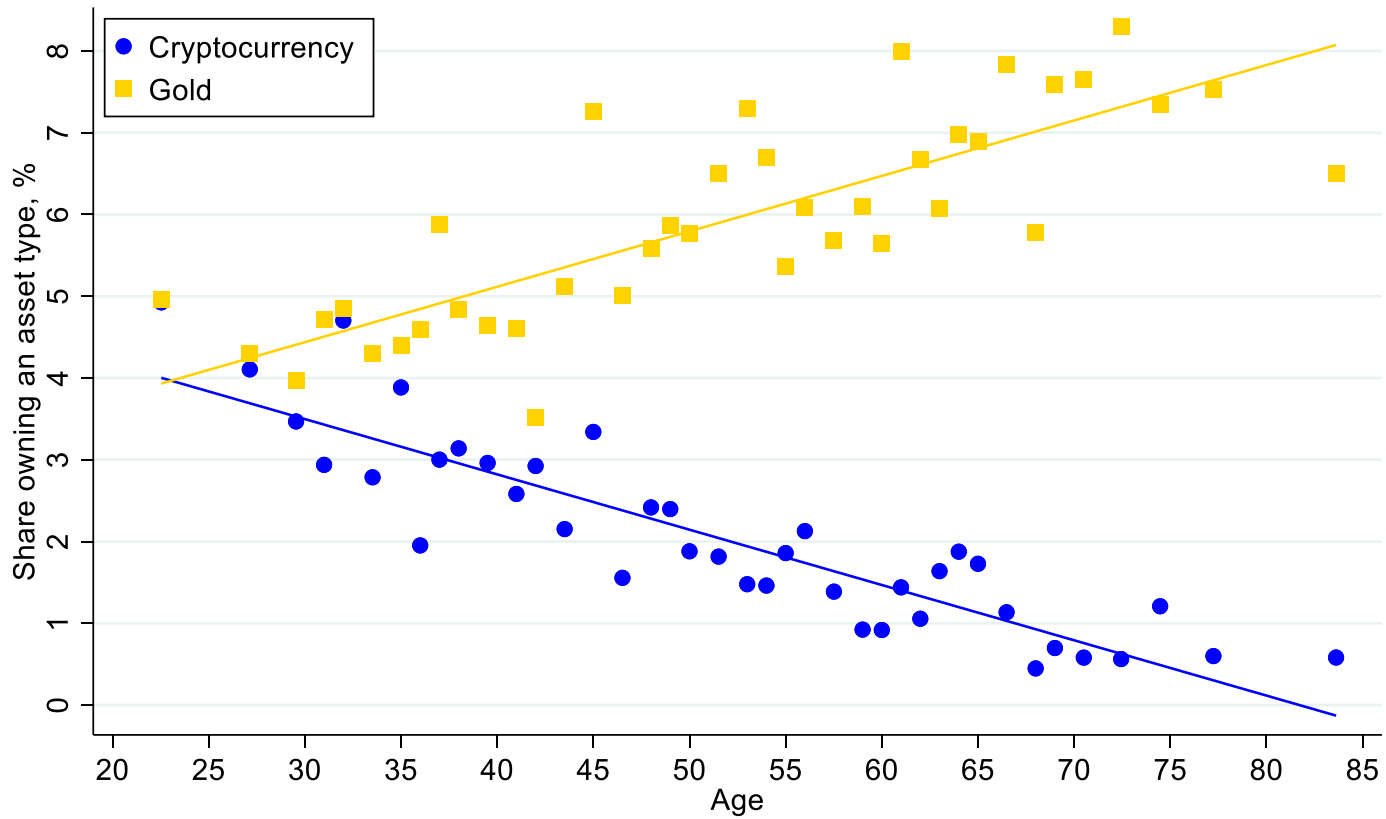
Asset	R ² of asset holding coming from	
	Observables	Expected Returns and Risk
Crypto	0.06	0.17
Gold	0.11	0.12
Bonds	0.10	0.08
Stocks	0.25	0.14

Notes: The table reports R² from regressing the desired share of each type of asset in an individual's financial portfolio on either individual observables (from Table 1) in the first column or on expected returns and perceived risk for all asset classes (as in Table 4) in the second column. The sample period is 2021Q3.

Appendix Table B5. Basic Facts about Cryptocurrencies.

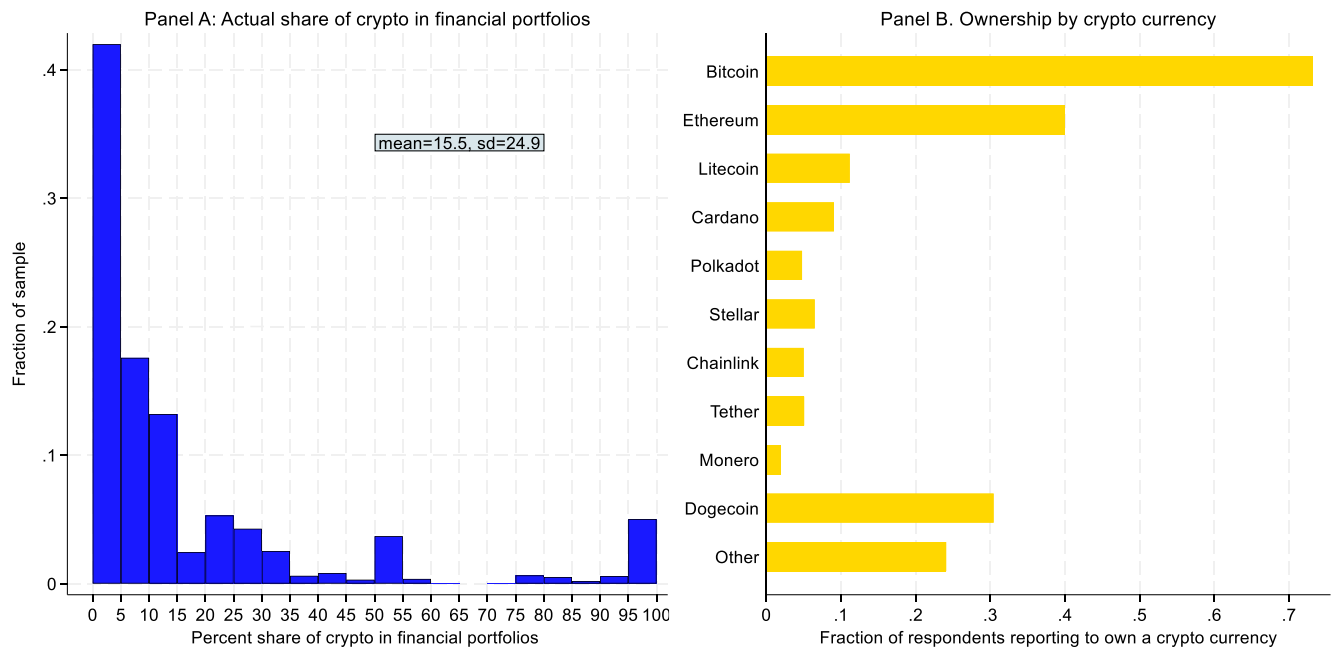
Cryptocurrency	Ticker	Initial release	Peak Market Cap. (Date)	Market Cap. (8/2021)	Market Cap. (8/2022)	Circulating Supply (11/2022)	Max Supply	Consensus Mechanism
Bitcoin	BTC	2009	1.23T (11/2021)	863.12B	446.40B	19,220,312	21,000,000	Proof-of-Work
Ethereum	ETH	2015	548.39B (11/2021)	382.55B	241.71B	122,373,866	unlimited	Proof-of-Work (until 9/2022), Proof-of-Stake
Litecoin	LTC	2011	23.17B (5/2021)	11.89B	4.29B	71,722,094	84,000,000	Proof-of-Work
Cardano	ADA	2017	94.74B (9/2021)	61.83B	18.23B	34,439,755,761	45,000,000,000	Proof-of-Stake
Polkadot	DOT	2020	53.21B (11/2021)	23.22B	9.27B	1,140,253,126	unlimited	Proof-of-Stake
Stellar	XLM	2014	15.75B (5/2021)	9.30B	3.17B	25,704,864,430	50,001,806,812	Stellar Consensus Protocol
Chainlink	LINK	2019	20.76B (5/2021)	11.66B	3.98B	507,999,970	1,000,000,000	Decentralized Oracle Networks
Tether	USDT	2014	83.16B (5/2022)	63.39B	67.55B	65,362,681,003	not available	Proof-of-Work, Proof of Reserves
Monero	XMR	2014	7.90B (5/2021)	4.80B	3.09B	18,207,268	unlimited	Proof-of-Work
Dogecoin	DOGE	2013	73.80B (5/2021)	44.52B	10.18B	132,670,764,300	unlimited	Proof-of-Work

Appendix Figure B1: Gold and Crypto Ownership by Age



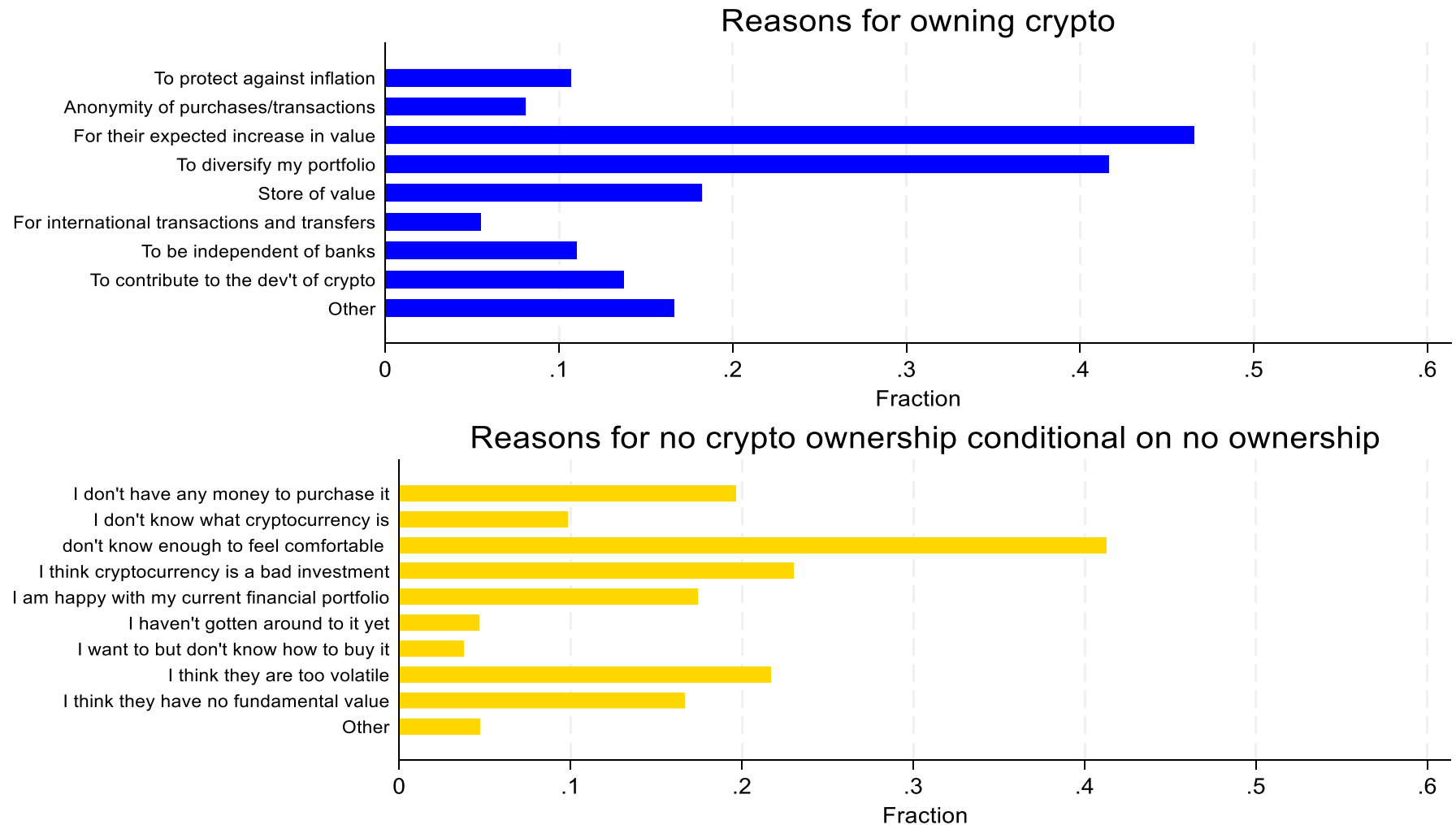
Notes: The figure plots the binscatter for the distribution of asset ownership by age for 2019-2020. The ownership information is elicited for respondents who report having meaningful (monthly income or more) financial wealth. No controls are included.

Appendix Figure B2: Crypto in Financial Portfolios of Crypto Owners



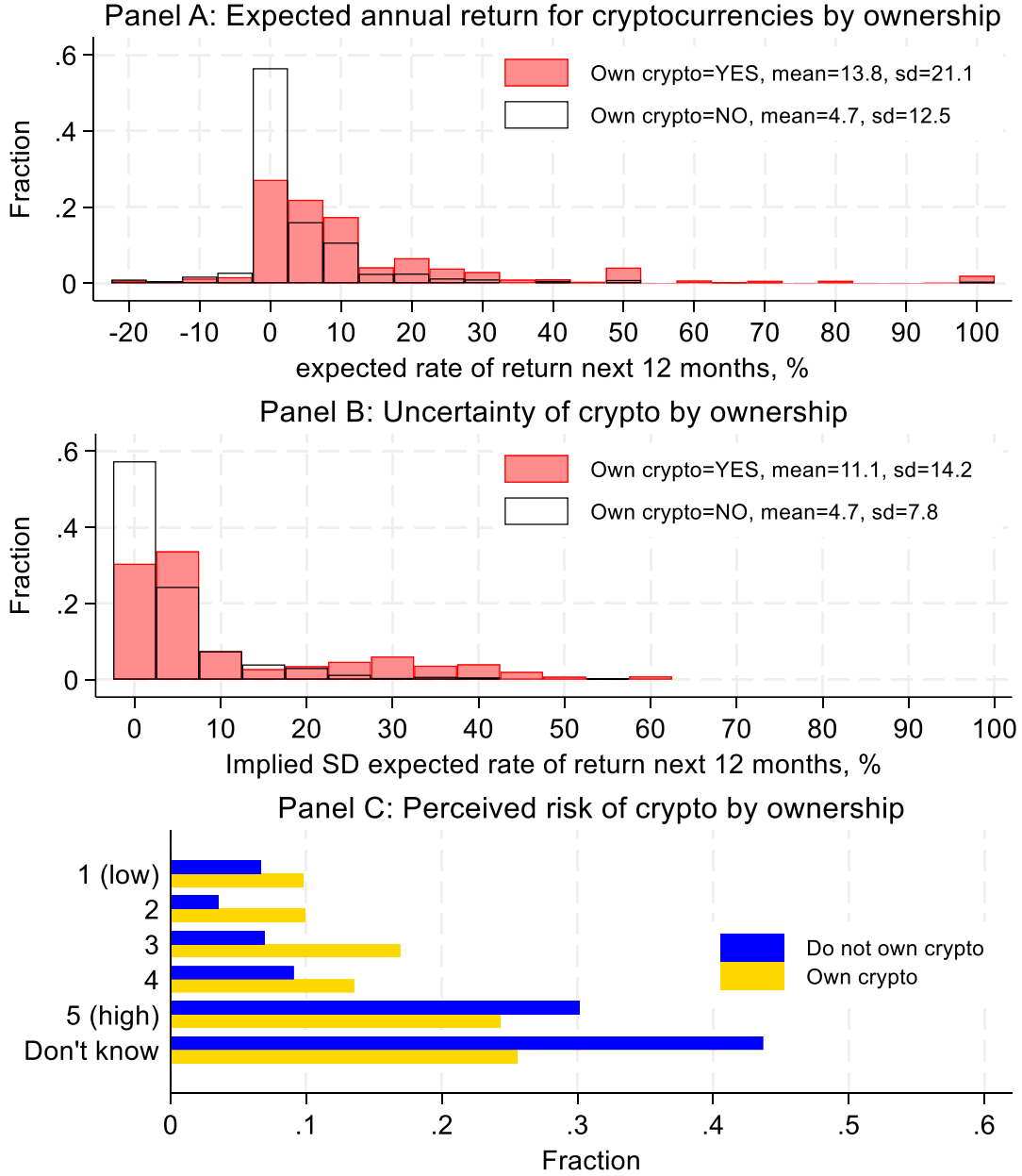
Notes: Panel A reports the share of financial portfolios allocated to cryptocurrencies conditional on owning a cryptocurrency. Panel B reports which cryptocurrencies are in financial portfolios conditional on owning a cryptocurrency. For Panel B, respondents can choose multiple currencies. The data are from the summer 2025Q2 survey wave.

Appendix Figure B3: Reasons Why Individuals Do and Do Not Own Cryptocurrency



Notes: The top panel shows the distribution of responses to “Why do you hold cryptocurrency? Please select all that apply.” The bottom panel shows the distribution of responses to “Please select the reason(s) that best describe why you don’t own any cryptocurrency.” The data are from the 2025Q2 survey wave.

Appendix Figure B4: Expected Crypto Returns, Uncertainty about Returns, and Perceived Risk of Crypto



Notes: Panel A reports the histogram of expected returns for Bitcoin by crypto ownership. Panel B reports the histogram for implied standard deviation (uncertainty) in the reported subjective distributions by ownership status. The data for Panel B are restricted to the control group because subjective distributions were elicited only post-treatment. We assume a symmetric triangular distribution when we compute the implied mean and uncertainty for asset class k and respondent i as follows: $E(\text{return}_i^k) = \frac{1}{4}\{\text{Lowest rate}\}_i^k + \frac{1}{2}\{\text{Most likely rate}\}_i^k + \frac{1}{4}\{\text{Highest rate}\}_i^k$ and $E \text{var}(\text{return}_i^k) = \frac{1}{4}(\{\text{Lowest rate}\}_i^k)^2 + \frac{1}{2}(\{\text{Most likely rate}\}_i^k)^2 + \frac{1}{4}(\{\text{Highest rate}\}_i^k)^2 - (E(\text{return}_i^k))^2$ and $E \text{std}(\text{return}_i^k) = \sqrt{E \text{var}(\text{return}_i^k)}$. Panel C reports the distribution of the qualitative responses on Bitcoin's perceived riskiness. The data are from the 2025Q2 survey wave.

Survey questionnaire

2025

;Please have **all household members, 18 years or older**, answer this survey.

;SHOW THIS TEXT WITH Q1

This survey is about your household's finances and opinions about the economy. As with any of our surveys, the information you provide is confidential and is only shared in an aggregate (not individual) level.

Please tell us about yourself...

;DROP-DOWN BOXES

1. What is your date of birth? (Please select the month, day, and year)

Month: January, February...December

Day: 1, 2, 3...31

Year: 1916, 1917...2007

2. What is your gender?

☐ Male

☐ Female

3. What is your first name? (Please type it in)

6. Suppose that you had to make an unexpected payment equal to one month of your after-tax income, would you have sufficient financial resources (access to credit, savings, loans from relatives or friends, etc.) to pay for the entire amount?

☐ Yes

☐ No

☐ Don't know/prefer not to answer

7. Which of the following best characterizes your household:

☐ Own our house/apartment without a mortgage

☐ Own our house/apartment and have a fixed-rate mortgage

☐ Own our house/apartment and have a variable-rate mortgage

☐ Rent our house/apartment

☐ Other

8. Does your household have total financial investments (excluding housing) worth more than one month of combined household income?

☐ Yes

☐ No

10. Over the last 6 months, did you buy a new home, car, or other major big-ticket item (fridge, TV, furniture, etc.)?

☐ Yes

☐ No

;ASK IF: Q10=YES

;RANDOMIZE

10a. Which of the following did you purchase in the last 6 months? Please select all that apply.

☐ A house/apartment

☐ A car or other vehicle

☐ A large home appliance or electronics

☐ None of the above >EXCLUSIVE >ANCHOR >SKIP TO TEXT BEFORE Q12 Q13

Inflation/wage/price expectations

We would like to ask you about the rate of inflation/deflation (Note: inflation is the percentage rise in overall prices in the economy, most commonly measured by the Consumer Price Index and deflation corresponds to when prices are falling).

13. In THIS question, you will be asked about the probability (PERCENT CHANCE) of something happening. The percent chance must be a number between 0 and 100 and the sum of your answers must add up to 100. What do you think is the percent chance that, **over the next 12 months...**

	Percentage Chance
<i>the rate of inflation</i> will be 12% or more	_____
<i>the rate of inflation</i> will be between 8% and 12%	_____
<i>the rate of inflation</i> will be between 4% and 8%	_____
<i>the rate of inflation</i> will be between 2% and 4%	_____
<i>the rate of inflation</i> will be between 0% and 2%	_____
<i>the rate of deflation (opposite of inflation)</i> will be between 0% and 2%	_____
<i>the rate of deflation (opposite of inflation)</i> will be between 2% and 4%	_____
<i>the rate of deflation (opposite of inflation)</i> will be between 4% and 8%	_____
<i>the rate of deflation (opposite of inflation)</i> will be between 8% and 12%	_____
<i>the rate of deflation (opposite of inflation)</i> will be 12% or more	_____
% Total [TOTAL ANSWERS FROM ABOVE – MUST SUM TO 100%]	_____

14. Over the **last** 12 months, what do you think the overall rate of inflation/deflation has been **in the economy**?

Answer: The rate of inflation/deflation was _____ percent over the last 12 months.

If you think there was inflation, please enter a positive number. If you think there was deflation, please enter a negative number. If you think there was neither inflation nor deflation, please enter zero.

[RANGE: -100 to 100 ALLOW FOR UP TO 2 DECIMAL POINTS]

19. Do you have a paid job?

☐ Yes

☐ No

;ASK IF: Q19=YES

21. How much do you make before taxes and other deductions at your main/current job, on an annual basis? Please include any bonuses, overtime pay, tips or commissions.

_____ dollars per year

☐ Prefer not to answer

;ASK IF: Q19=YES

28. How many total hours per week do you work in a typical week these days?

_____ Hours/week [RANGE: 0-168, ONE DECIMAL]

☐ Prefer not to answer

;ASK IF: Q19=YES

50. What do you think is the percent chance that you will lose your job during the next 12 months?

_____ % [RANGE: -100-100, ONE DECIMAL]

;ASK IF: Q19=NO

30A. When did you stop working?

Month/Year [dropdown menu] (before April 2020, April 2020, May 2020, ..., March 2025)

☐ Don't remember

☐ Prefer not to answer

;ASK IF: Q19=NO

30. Are you actively looking for a job? (Select one)

- ☐ Yes
- ☐ No

;ASK IF: Q30=YES

50A. What do you think is the percent chance that you will find a job during the next 12 months?

_____ % [RANGE: -100-100, ONE DECIMAL]

;RANDOMIZE

;ASK IF: Q30=NO

42. Here are a number of possible reasons why people who are not working choose not to look for work. Please select all that apply to you.

- ☐ Homemaker
- ☐ Raising children
- ☐ Student
- ☐ Retiree
- ☐ Disabled, health issues
- ☐ Couldn't find a job
- ☐ On break
- ☐ No financial need
- ☐ Temporarily laid-off (expect to be recalled with the next 6 months)
- ☐ Temporarily laid-off (do not expect to be recalled with the next 6 months)
- ☐ Other >ANCHOR

;ASK IF: Q19=NO

30D. If you receive unemployment benefits, how much do you get in unemployment benefits per week? Please provide a dollar amount. If you do know the exact amount, please report an estimate.

_____ dollars per week

- ☐ I do not receive unemployment benefits but I applied and I am still waiting
- ☐ I do not receive unemployment benefits
- ☐ I do not know
- ☐ Prefer not to answer

;ASK If 30D provides a dollar amount

30D1. What were your typical wages per week? (Please enter a dollar amount)

; ask everybody

27. Suppose someone offered you a job in June 2025 in a line of work that you would consider. What is the lowest annual wage or salary you would accept (BEFORE taxes and other deductions) for this job? Please enter a dollar amount.

\$ *per year*: [0-999999]

- ☐ I am not interested in taking another job
- ☐ Prefer not to answer

;CRYPTOCURRENCY BLOCK

C1. Do you currently own any cryptocurrency (like Bitcoin, Ethereum, etc.)?

- ☐ Yes
- ☐ No

; Ask if C1 = Yes

; RANDOMIZE ORDER

CY1. What kind of cryptocurrency(ies) do you own? Select all that apply.

- ☐ Bitcoin
- ☐ Ethereum
- ☐ Litecoin
- ☐ Cardano
- ☐ Polkadot
- ☐ Stellar
- ☐ Chainlink
- ☐ Tether
- ☐ Monero
- ☐ Dogecoin
- ☐ Other >ANCHOR

; Ask if C1 = Yes

; RANDOMIZE ORDER

CY2. Why do you hold cryptocurrency? Please select all that apply.

- ☐ To protect against inflation
- ☐ Anonymity of purchases/transactions
- ☐ For their expected increase in value
- ☐ To diversify my portfolio
- ☐ Store of value
- ☐ For international transactions and transfers
- ☐ To be independent of banks
- ☐ To contribute to the development of cryptocurrency
- ☐ Other <ANCHOR

; Ask if CY2 has multiple selections

CY2b. Of the reasons you mentioned, please rank them in order of importance, with **1 being the most important**.

_____ [LIST EACH SELECTED OPTION FROM CY2]

; Ask if C1 = Yes

;RANDOMIZE

CY3. In the next 6 months, do you plan to purchase more cryptocurrency in total, keep your holdings as they currently are, or sell cryptocurrency in total? (Select one)

- ☐ Purchase more cryptocurrency overall
- ☐ Keep my holdings of cryptocurrency the same
- ☐ Sell cryptocurrency overall
- ☐ Prefer not to say >ANCHOR
- ☐ I don't know >ANCHOR

;Ask if CY3 = Purchase more cryptocurrency

CY4a. How much more cryptocurrency do you **plan to buy** in the next 6 months? Please enter the percentage increase relative to your cryptocurrency holdings.

I plan to increase my cryptocurrency holdings by _____ % in the next 6 months

- ☐ Prefer not to say
- ☐ I don't know

;Ask if CY3 = Sell cryptocurrency

CY4b. How much of your cryptocurrency do you **plan to sell** in the next 6 months? Please provide a percentage of your current cryptocurrency holdings.

_____ % of the current holdings that I will sell

- ☐ Prefer not to say
- ☐ I don't know

; Ask if C1 = Yes

CY5. How large a share of your financial portfolio are cryptocurrencies at the moment?

For your financial portfolio, please consider your total checking, savings, retirement, CDs, and other liquid financial assets (do not include housing/real estate).

Cryptocurrency accounts for _____ % of my financial portfolio.

☐ Prefer not to say

☐ I don't know

;Ask if C1 = No QUESTIONS FOR THOSE WHO DON'T HOLD CRYPTOCURRENCY

;RANDOMIZE

CN1. Please select the reason(s) that best describe why you don't own any cryptocurrency? (Select all that apply)

☐ I don't have any money to purchase cryptocurrency or any other financial assets

☐ I don't know what cryptocurrency is

☐ I don't know enough about cryptocurrency to feel comfortable investing in it

☐ I think cryptocurrency is a bad investment

☐ I am happy with my current financial portfolio

☐ I haven't gotten around to it yet

☐ I want to but don't know how to buy it

☐ I think they are too volatile

☐ I think they have no fundamental value

☐ Other <ANCHOR

; Ask if CN1 has multiple selections

CN2. Of the reasons you mentioned, please rank them in order of importance, with **1 being the most important**.

___ [LIST EACH SELECTED OPTION FROM CN1]

; RANDOMIZE ORDER

C2. What approximate rate of return do you expect to see for each of the following assets in the next 12 months?

Please answer the question to the best of your knowledge even if you don't own the asset and are not very familiar with it.

US Stocks: _____ %

☐ Don't know

US Bonds: _____ %

☐ Don't know

US Savings Account: _____ %

☐ Don't know

Cryptocurrency: _____ %

☐ Don't know ;SHOW IF C1=YES

US Housing: _____ %

☐ Don't know

Gold: _____ %

☐ Don't know

C2a. In the next questions, you will be asked about the probability (PERCENT CHANCE) of something happening.

The percent chance must be a number between 0 and 100 and the sum of your answers must add up to 100.

What do you think is the percent chance that, **over the next 12 months...**

Percentage Chance

the rate of return on US stocks will be 50% or more

the rate of return on US stocks will be between 40% and 50%

the rate of return on US stocks will be between 30% and 40%

the rate of return on US stocks will be between 20% and 30%

the rate of return on US stocks will be between 10% and 20%

the rate of return on US stocks will be between 0% and 10%

the rate of return on US stocks will be between -10% and 0%

the rate of return on US stocks will be between -20% and -10%

the rate of return on US stocks will be between -30% and -20%

the rate of return on US stocks will be between -40% and -30%

the rate of return on US stocks will be between -50% and -40%

the rate of return on US stocks will be less than -50%

% Total [TOTAL ANSWERS FROM ABOVE – MUST SUM TO 100%]

;Skip if CN1=2 or 3 "I don't know..."

C2b. What do you think is the percent chance that, **over the next 12 months...**

	Percentage Chance
<i>the rate of return on Bitcoin will be 50% or more</i>	_____
<i>the rate of return on Bitcoin will be between 40% and 50%</i>	_____
<i>the rate of return on Bitcoin will be between 30% and 40%</i>	_____
<i>the rate of return on Bitcoin will be between 20% and 30%</i>	_____
<i>the rate of return on Bitcoin will be between 10% and 20%</i>	_____
<i>the rate of return on Bitcoin will be between 0% and 10%</i>	_____
<i>the rate of return on Bitcoin will be between -10% and 0%</i>	_____
<i>the rate of return on Bitcoin will be between -20% and -10%</i>	_____
<i>the rate of return on Bitcoin will be between -30% and -20%</i>	_____
<i>the rate of return on Bitcoin will be between -40% and -30%</i>	_____
<i>the rate of return on Bitcoin will be between -50% and -40%</i>	_____
<i>the rate of return on Bitcoin will be less than -50%</i>	_____
% Total [TOTAL ANSWERS FROM ABOVE – MUST SUM TO 100%]	_____

C2c. What do you think is the percent chance that, **over the next 12 months...**

	Percentage Chance
<i>the rate of return on Gamestop will be 25% or more</i>	_____
<i>the rate of return on Gamestop will be between 40% and 50%</i>	_____
<i>the rate of return on Gamestop will be between 30% and 40%</i>	_____
<i>the rate of return on Gamestop will be between 20% and 30%</i>	_____
<i>the rate of return on Gamestop will be between 10% and 20%</i>	_____
<i>the rate of return on Gamestop will be between 0% and 10%</i>	_____
<i>the rate of return on Gamestop will be between -10% and 0%</i>	_____
<i>the rate of return on Gamestop will be between -20% and -10%</i>	_____
<i>the rate of return on Gamestop will be between -30% and -20%</i>	_____
<i>the rate of return on Gamestop will be between -40% and -30%</i>	_____
<i>the rate of return on Gamestop will be between -50% and -40%</i>	_____
<i>the rate of return on Gamestop will be less than -50%</i>	_____
% Total [TOTAL ANSWERS FROM ABOVE – MUST SUM TO 100%]	_____

C3. Please rate how risky you perceive each of the following assets to be over the next twelve months on a scale of **1=Very safe to 5 = Very risky, you may select any number in between as well.**

US Stocks:	_____	☐ Don't know
US Bonds:	_____	☐ Don't know
Savings Account:	_____	☐ Don't know
Cryptocurrency:	_____	☐ Don't know ;SHOW IF C1=YES
US Housing:	_____	☐ Don't know
Gold:	_____	☐ Don't know

C4. In two years, what fraction of your financial portfolio/savings would you like cryptocurrencies to be ideally? **Please provide a percentage ranging from 0 to 100.**

_____ %

☐ Prefer not answer

☐ I don't know

;ASK IF C4<100

C5. In two years, what fraction of your financial portfolio/savings would you like stocks to be ideally? **Please provide a percentage ranging from 0 to 100.**

_____ %

☐ Prefer not answer

☐ I don't know

;INFORMATION TREATMENT

;RANDOMLY ASSIGN RESPONDENTS TO ONE OF GROUPS:

;If CN1=2 or 3 "I don't know..." don't assign to Groups 3, 4, 8

;Group 1 : go straight to final questions

;All Groups but GROUP 1: "You are almost done with the survey. Before the final questions, we would like you to know the following: ;

; Inflation Treatments

;SHOW IF Group 2:

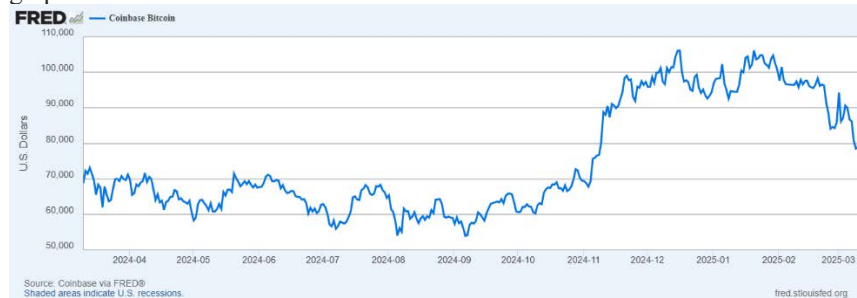
The U.S. Federal Open Market Committee (which sets short-term interest rates) forecasts a 2.5% inflation rate in 2025.

;SHOW IF Group 3:

The value of a Bitcoin has increased by 14.3% in the last year.

;SHOW IF Group 4:

graph:

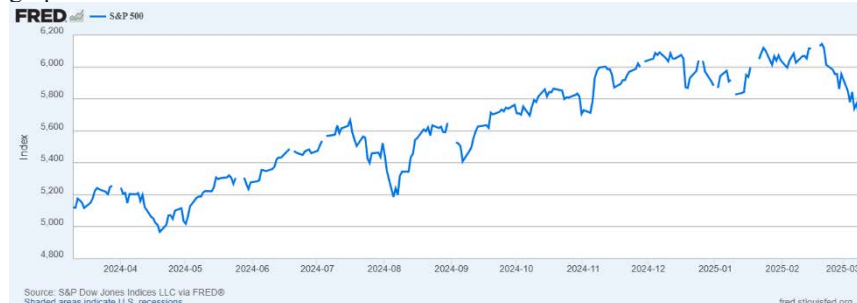


;SHOW IF Group 5:

The value of the S&P500 has increased by 9.7% in the last year.

;SHOW IF Group 6:

graph:



;SHOW IF Group 7:

The value of Gamestop has increased by 60.11% in the last year.

SHOW IF Group 8:

graph:



Q50B. What do you think the inflation/deflation rate (as measured by the Consumer Price Index) is going to be over the next 12 months? Please provide an answer as a percentage change from current prices.

..... % [RANGE: -100 to 100, ONE DECIMAL]

If you think there will be inflation, please enter a positive number. If you think there will be deflation, please enter a negative number. If you think there will be neither inflation nor deflation, please enter zero.

; RANDOMIZE ORDER

Q51. By the end of 2025, how would you ideally like to see your financial wealth (excluding housing/real estate) allocated across the following assets? Please provide a percentage for each asset class. The total should sum to 100 percent.

Stocks: _____ %
Bonds: _____ %
Cryptocurrency: _____ %
Gold/precious metals: _____ %
Cash/Checking/Savings: _____ %
Total: **100 %**

☐ I don't expect to have any financial assets <ANCHOR

;RANDOMIZE ORDER

Q52. We would like to know how you think different assets might evolve over the next year. There is no right or wrong answer to this. For each of the following assets, **please tell us what you think is the *most likely* rate of return over the next twelve months**, as well as, **the *lowest* and *highest* rates of return** that we might see over twelve months.

	Lowest rate of return	<i>Most likely rate of return</i>	Highest rate of return
US Stocks	%	%	%
Cryptocurrency	%	%	%
Gold	%	%	%
Gamestop	%	%	%